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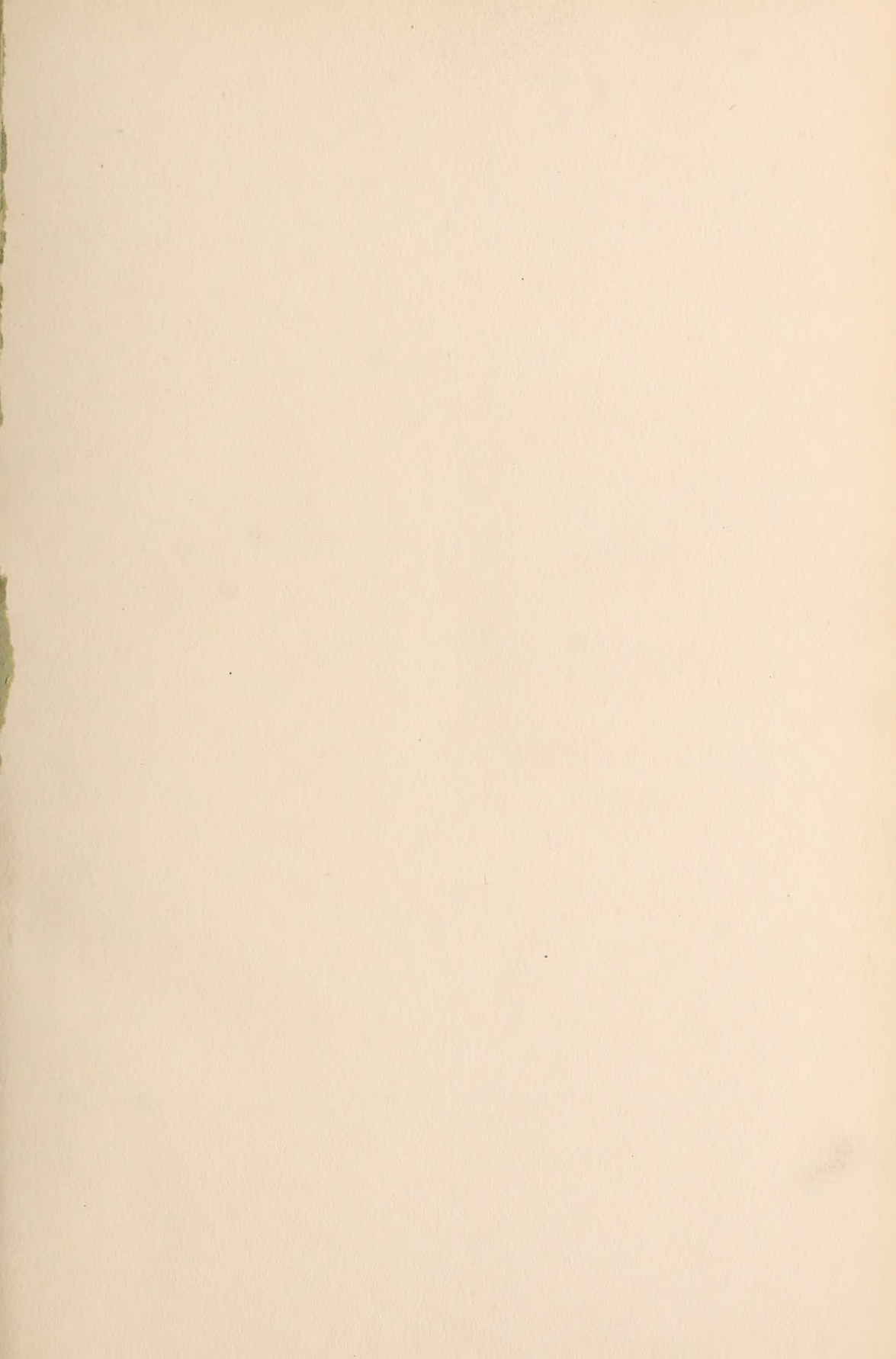

















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# COLORADO MEDICINE

## A Medical Journal

Containing the Proceedings of The Colorado State Medical Society and its Constituent Societies, With Papers Read Before Them, Abstracts of the More Important Current Articles and Other Related Matter

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H. R. BULL, M. D.,  
PRESIDENT COLORADO STATE MEDICAL SOCIETY,  
1907



# COLORADO MEDICINE

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All *communications* to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are *typewritten*.

Communications and items of interest are invited from all parts of the state. Death notices, removals, changes of address, etc., are especially desired.

*Secretaries* of the County Societies are earnestly requested to report their meetings, including the subject matter of the papers presented, and in general, the substance of the discussions.

Marked copies of local newspapers, or clippings, containing matters of interest to the profession will be gratefully acknowledged. The name of the sender should be given.

The journal will be issued on the 15th of each month. *All copy* must reach the editor not later than the first of the month. Advertisements of proprietary medicines will be accepted provided the preparations advertised have been approved by the Council of Pharmacy and Chemistry of the American Medical Association. Address all communications regarding advertising to

JAMES M. BLAINE, M. D., *Adv. Mgr.*, 3-4 Steele Block, Denver, Colo.

## IMPORTANT NOTICE.

All members of the Colorado State Medical Society are entitled to a copy of this journal each month. Failure to receive the same, and change of address, should be promptly communicated to the editor.

VOL. IV.

DENVER, JANUARY, 1907.

No. I

## Editorial Comment

### PRESIDENT BULL.

Dr. H. R. Bull, the new president of the State Medical Society, is a man worthy of more than a passing notice. By strict attention to the study, advancement and rational practice of medicine, he has, in twenty years, built for himself a reputation second to none in the state of Colorado. Dr. Bull is a pioneer of Grand Junction, and represents the great development of the western slope. His progress in the science and art of medicine has kept pace with the development of the garden spot of Colorado.

In the old State Medical Society, for many years, Dr. Bull was the only member living in the western slope, and at most of the annual meetings, the only representative west of Leadville. The honor, therefore, of being president of the reorganized society is one well deserved, as he has always assisted in its maintenance and advancement.

Dr. H. R. Bull was born near the town

of Warwick, N. Y., on October 28th, 1862. His parents were of English descent, their ancestors having lived in this community for seven generations. His family may truly be said to be one of the "oldest" in the state.

At the age of six the doctor came with his family to Amity, Mo., where his education began and was continued in the academic and collegiate departments of Washburn University, of Topeka, Kas., where he received the degree of B.S. in 1884. He immediately entered the Jefferson Medical College, Philadelphia, and graduated with the class of 1887.

He located in Grand Junction the same year, and became a factor in the development of that country. The impress made by his work and worth will last for generations.

J. M. B.

## INSURANCE EXAMINATION FEE QUESTION.

Life insurance examinations have been to the conscientious medical observer farcical to a greater extent than they

should be. The evidence of careless and unnecessarily inadequate inquiry and observation relative to the fitness of a candidate comes to us through direct knowledge of the lack of qualification and willful dereliction on the part of examiners, and the evidence of such conditions in the result.

Instances are not uncommon in which death occurs as a result of long standing disease, when the record of examination would indicate the applicant to have been an exceptionally good risk, and while such occurrences are a loss to the company, they also reflect upon the profession to a great extent. It is fair to presume that a certain percentage is due to careless precursory examination indulged in because the small remuneration did not warrant the devotion of the time necessary to complete and actual observation conducted systematically and independent of the outward appearance of the individual.

Capable men, and men of professional pride and honor—men who could not be induced to fill out a report founded rather upon a knowledge of requirements of the company than the actual conditions present—cannot afford the time to do upright work in competition with the unscrupulous men who require neither time nor ability. The former class are invariably busy men, and detraction from regular work is entitled to the same compensation from corporations as from individuals seeking advice.

That this fact is recognized by some fifteen companies is evident from their willingness to pay the \$5 flat fee, and a recent addition to the list, the American National Insurance Company, of Galveston, Texas, in a letter announcing the adoption of this fee states: "*It is the desire of this company to employ only the best examiners, and they realize they can only get good men by paying a reasonable fee.*"

This is the view which we believe all

insurance companies should take, and it indicates the good common sense and sound business principle which should prevail in all concerns who expect to stand by their just losses without contest.

In view of such a classification are we not, as medical men, lowering ourselves below the limits of *best examiners* or *good men* in the eyes of the corporations and our confreres when we accept a fee below that of the value of *best opinions*?

Then let all *good men* decline to submit to the \$3 rate, and it must seem inevitable that \$5 is none too much for the *best* work, and no one will determine this sooner than the companies who are willing to accept cheap opinions.

We are informed of a new phase of the subject which will admit of the characterization of dodging or shifting of the responsibility and which is contemptible to a degree beyond that to be expected of corporations of trust. It has been the custom heretofore to allow the examiner's fee from the home office; the latest, however—and for no other apparent reason than the evading of the responsibility—is the news that the state agents are to employ the examiners and to imburse them from their own commissions. Such a course cannot, to our minds, influence the results, and it is mentioned merely to indicate our surprise at the methods adopted by some companies—evidently overburdened with high salaried officers, and means to supply to them—over a difference of \$2 per examination.

The December number of the *Kentucky Medical Journal* is styled an "Insurance Number," the contents of which indicates to a remarkable degree the unanimity of purpose on the part of the membership to decline to submit to the reduction of fees. The following letter of inquiry was sent out by the Kentucky State Association: "Will you agree with the other doctors of Kentucky to make insurance examinations for no company which



employs incompetent examiners?" Excerpts from about 380 emphatic replies are given, and a list of 540 physicians from whom replies were received too late to be included in the already crowded space. In all, about 900 signed the agreement.

The report of the Committee on Insurance appointed at the Boston session of the A. M. A. appears in a recent number of the *Journal*, (*Journ. A. M. A.*, Dec. 8, 1906, p. 1937). When this committee, composed of John H. Musser, John A. Wyeth, Wm. J. Mayo, Frank Billings and J. N. McCormack, was refused audience until their official capacity was "brushed aside," it seems to us to fall but little short of a direct insult to our national association.

This journal is the official organ of the Colorado State Medical Society, and endeavors to express the sentiments as far as possible of its membership, maintaining their honor and upholding their interests. Our position is taken after due deliberation; after the resolutions adopted at our last session; with the belief that we are protecting the companies who realize the importance of capability; and, with the endeavor to maintain the standard of dignity our association has always held.

The following are the companies who have adopted the \$5 flat fee; we hope to add to the list in the near future:

The Aetna Life, Hartford, Conn.; Boston Mutual Life, Boston, Mass.; Capital Life, Denver, Colo.; Citizen's Life, Louisville, Ky.; Colorado National Life, Denver, Colo.; Commonwealth Life, Louisville, Ky.; Connecticut Mutual Life, Hartford, Conn.; Fort Worth Life, Fort Worth, Tex.; Manhattan Life, New York City, N. Y.; Massachusetts Mutual Life, Springfield, Mass.; Mutual Benefit Life, Newark, N. J.; National Life, Montpelier, Vt.; New England Mutual Life, Boston, Mass.; Northwestern Mutual Life, Milwaukee, Wis.; Pacific Mutual Life, San Francisco, Calif.; Pennsylvania Mutual Life, Philadelphia, Penn.; Provident Mutual Life, Boston, Mass.; Provident Life and Trust, Philadelphia, Pa.; Reliance Life, Pittsburgh, Pa.

### THE NATIONAL FORMULARY.

It seems unfortunate that such valuable lists of high-class Galenical preparations as are contained in the United States Pharmacopea and the National Formulary should be known, in large part, only to the pharmacists; in fact, few physicians are even familiar with the relative importance of the Pharmacopea, the Dispensatories and the National Formulary.

The Pharmacopea was deemed necessary some eighty years ago in the United States. Up to the present time, as an evidence of the universal need of such a work, about twenty-three nations have compiled lists of substances of recognized medicinal value under the authority of their governments. In the United States it is a recognized standard, and pharmacists can be held to the purity requirements adopted by the commission provided the official titles are used in prescribing, and herein lies the greatest value of the work, in these, the days of substitution and adulteration.

The Dispensatories are commentaries upon the Pharmacopeas. Some editions compare the official lists of nearly all nations authorizing such works, and as well mention all substances which have been used as remedial agents with the chemico-pharmaceutic, therapeutic, botanic, toxicologic and posologic data added.

Finally, there is the National Formulary, a work now in its third edition, which was first compiled in 1888, by a committee appointed from the membership of the American Pharmaceutical Association. The committee who had in charge the last revision represented 35 states (Colorado was not included) which carries with it the assurance that it is not a collection of colloquial receipts, but the best ideas from divers sources.

In the preparations listed here the ingredients are supposed to conform to the purity standards of the U. S. P., and in

all formulas which include such preparations as fluid extracts, the letters U. S. P. follow in each instance. Some of the mixtures herein contained are worthy of special mention—Elixir Glycerophosphatum; Elixir Terpini Hydras cum Codeina; Elixir Terpini Hydras cum Heronia; Emulsion Petroli; Liquor Antisepticus Alkalinus; Liquor Ferri Peptonati cum Mangano; Syrupus Phosphatum Compositum, etc.

These are by no means all, though they have been selected because among them will be recognized mixtures which are commonly prescribed with the specification of some particular manufacturing pharmaceutical house.

When any preparation contained in these works has been specified by the use of the letters "U. S. P." or "N. F." there is a right to demand, in case of question, whether they were prepared in accordance with the formulas of the respective work and if the ingredients were in conformity with the purity requirements therein set forth.

Anyone who is unable to prepare them from the clear working processes of preparation given, is not entitled to the name of *pharmacist* and is consequently unworthy of the trust and confidence of the medical profession in the compounding and dispensing of their prescriptions.

It seems most remarkable that when we recognize, from time to time, preparations as being of sufficient medicinal value to make them official, and that, as soon as the constituents and method of preparation became a matter of common knowledge among apothecaries, their therapeutic value diminished and they became rapidly displaced by remedies with new names and greater cost. Indeed, it seems more than strange that so long as they were manufactured exclusively by one individual "discoverer" or firm and marketed at one hundred times their real value, they represented medicinal efficiency enough to be recommended by our

profession; Turlington's Balsam or Friar's Balsam are not near so wonderful since it became *Tinctura Benzoini Compositus*, nor has it the range of indication. More recently, a preparation known as "Malachol" lost its value when it became known as *Liquor Sodii Phosphas Compositus*—its cholagogue effect diminished with the price. We can speculate upon whether or not Gray's Glycerine Tonic Compound would be so frequently prescribed if the "Gray" and the "Compound" were eliminated with the manufacturer's profit.

There has been authorized a manual upon the Pharmacopea and the National Formulary, designed especially for physicians, which will be in press within the next month, and will be obtainable from the *Journal of the A. M. A.* A careful reading of this work should open the eyes of the unfamiliar to the realization of the absurdity of depending upon nostrums made by *pseudo*-chemical and pharmaceutical concerns.

If more attention were given to these features in prescribing, there should be, manifestly, less difficulty in obtaining active preparations of acknowledged merit and elegance, and such a course on the part of the medical profession should also furnish an incentive to a superior pharmacy and tend to regain for it the position which as a sister profession it deserves, as our appreciation of, and interest in the aims of its highest representatives.

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#### A. M. A. DIRECTORY.

The work on the Physicians' Directory has been delayed for many reasons, especially the neglect of the secretaries of the State Societies to verify their membership lists, and the lack of correct records kept by the secretaries of licensing boards. However, it is in press, and every effort is being strained to have it ready for delivery in about 30 days, or about February 1, 1907.



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NOTICE.

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The dues to all the county and district societies in the state are now payable. Please remember that the secretary of your society, like yourself, is a busy man, therefore, relieve him of the necessity of notifying you that your dues are payable by sending him your check to-day for the amount. If you have forgotten the name and address of the secretary of your society, look on the inside of the front cover of this journal and you will find it.

\*\*\*\*\*

## Original Articles

### MIND CURE: ITS SERVICE TO THE COMMUNITY.\*

By RICHARD C. CABOT, M. D.,  
Boston.

I do not suppose I need to say at the outset that I am not a follower of Mrs. Eddy, and that I think a great deal of pitiful nonsense has been spoken and written by that lady and her followers as well as by various other sects of mental healers. Much of what they say is neither Christian nor scientific, neither instructive nor inspiring.

But we are all of us interested in Psychic Therapeutics, and I wish to inquire in this paper whether there is such a vast difference between Psychic Therapeutics and Mind Cure? It is true that psychic therapeutics is of Greek derivation and mind cure of Latin. This change of spelling seems to be in itself enough to induce many to give their attention to a set of facts that under the

old spelling were too unorthodox to speak of except with ridicule and disdain. But if we put aside for a moment the obvious flaws, faults and even sins committed by the mind curists we may find something more profitable in a survey in such elements of truth as may perhaps inhere in their curious practices.

To point to the cases of appendicitis dying unoperated under the ministration of a mind curist and to cases of diphtheria refused antitoxine under the fatuous advice of the Christian Scientist is not to prove that mind cure is bad. They kill people, of course, now and then; so do we. But nevertheless they are useful in the long run just as we are.

To refute their cures of cancer, infections, degenerations, fevers, or epilepsy is too easy. Of course they don't cure those things. The interesting question for us is: "What *do* they cure and how can we learn to cure it too?" They cure nervous disorders, not only or chiefly nervous prostration in its ordinary sense, but nervous dyspepsia, constipation, insomnia, etc.—affections which I think it is no exaggeration to say make up one-half, and the most unsatisfactory one-half of our practice. Their patients are mostly nervous women; so are ours. They do not cure them all; neither do we. They utterly fail as we fail in some apparently psychic diseases such as the depressed phase of ordinary insanity.

The limitations of psychic treatment in well-established disease are very great, but its preventive power may well be supposed to be great, for it gets a grip rarely attained by physicians on the actions of the not-yet-ill.

Their *theory* I grant is more than I can swallow, but here as in so many other fields we may perhaps find *good practice despite false theory*.

#### I.

Despite all its excesses and mistakes I

\*Read at the Annual Meeting of the Colorado State Medical Society, Denver, October 10, 1906.

find two great public services performed by the Mind Cure movement:—

1. Its insistence upon certain important aspects of the truth about health that have not yet received due attention.

2. Its just criticisms of certain medical faults.

I shall now take up the first of these points—the positive value of the ideas underlying Mind Cure.

#### WHAT MIND CURE STANDS FOR.

Let us consider for a moment the chief doctrines of mind cure and see what similarity, if any, there is between them and the teachings of scientific psychic therapeutics. If we lay aside the wrappings of overripe theology in which mind-cure doctrines are encased we find three main articles of belief:

1. People are sick because they think so.

2. People are sick because they don't behave themselves properly.

3. The thought of sickness is itself a pernicious one and should be banished so far as possible from consciousness.

Now, are these ideas so very far from the truth as we know it? Let us see. Taking first the tenet that people are sick because they (and their friends) think so. We know, of course, that cancer, tuberculosis, syphilis, nephritis, endocarditis and a host of other diseases are not produced by any mental influence whatever. On the other hand, who of us has not met with the type of patient who, having a pain in his left side and a little palpitation, lies awake, loses his appetite, worries himself sick, and turns up at your office weak and miserable because he is afraid of heart disease.

In one form or other we have all seen proof of the story of the man whose friends plotted against him and arranged that everyone who met him that day should exclaim with alarm: "How sick you look!" At first he pooh poohed the

suggestion and protested that he felt perfectly well, but as man after man reiterated the statement he began to feel more and more below par, until towards the end of the day he gave up and went home to bed. There is no question that the fear of disease can lead, through loss of appetite and sleep, to serious disturbance of nutrition, which in turn predispose to infection.

(2) The second cardinal tenet of mind cure is that many people are sick because they don't behave properly. Can anyone doubt it? Does anyone of us doubt that a considerable proportion of our patients are sick because they disregard what they know they ought to do. If people start life with neither a cast-iron constitution nor a hopelessly diseased one, the degree of health and comfort that they attain depends in great measure on the amount of character, intelligence, *ingenuity and pluck* which they bring to bear on their lives.

Aside from the obvious harm done by alcohol, venereal disease and reckless living, there is:

(a) The mass of women who by the inertia of rest are thoughtlessly drifting anywhere.

(b) The mass of men who by the inertia of motion are recklessly rushing nowhere.

(3) The third fundamental principle in mind cure is the perniciousness (for the patient) of the idea and atmosphere of disease. In this principle I think they are wholly right, although their way of expressing it is often absurd.

The last thing in the world that a man, and especially a woman, ought to have in mind is disease, symptoms and remedies. To the patient such thoughts are notoriously demoralizing and debilitating, but because we physicians do not find that it hurts us to think of them in others

we may forget to guard our patients sufficiently against all that suggests them.

For one who cannot do anything about a disease the thought of it is not merely useless but disintegrating. The study of anatomy and pathology benefit us physicians so much and seem to us so clear and valuable in every way, that we do not always realize that the sick person's contact with these facts is so different that for practical purposes they are different facts.

It is good for a physician to throw himself into the study of disease because it makes him forget himself. But we may fail to realize how bad this same consideration of disease is for the patient because it makes him think of himself. The very sight of the doctor and the associations that go with him may be bad for the patient to an extent that we are not likely to appreciate ourselves, especially as we know that *in acute illness* our visits are often the best thing in the patient's day. Therefore it is a good thing for any community to have in it a certain number of mind curists to preach the perniciousness of the medical atmosphere when it can possibly be avoided.

Robert Browning's latest biographer—Chesterton—gives a most intelligent account of Mrs. Browning's neurasthenia, of the way in which it was kept active in the atmosphere maintained about Mrs. Browning by her father and her physicians, and of the final destruction of the disease when Browning broke in, eloped with her and carried her off to Italy. In the course of this account Chesterton makes the rather startling general statement that a medical atmosphere is the lowest and worst atmosphere in the world. The exaggeration contained in this remark is too obvious to need comment, but the element of *truth* in it is well worth our study. We get so used to sick-rooms; clinics and hospitals that we forget the normal, lay point of view about

them, forget that they all stand, and ought to stand for a miasma and a stench in the moral nostrils of all healthily constituted persons. The old-fashioned doctor who came in and talked away vigorously about everything except the illness, made his examinations so inconspicuously that they were hardly noticed, gave his directions, and got out like a flash—had the right idea of bringing into the sickroom as little of the medical atmosphere and *as much of its antidote* as he could. We are quick to criticise the nurse who talks about her hospital experiences to her patients thereby keeping the medical atmosphere about them, but it is far easier to see the mote in our neighbor's eye than the beam in our own. We physicians well know how quickly sickness and a medical atmosphere in our own homes wears us out; are we doing our best to keep it out of other people's homes?

Here the mind curist does a good piece of public service by pressing upon us, in his own peculiar jargon, the truth that disease and all that reminds us of it, including the doctor, should be forgotten and put out of sight as far and as fast as possible, and that health and the interests of health are the only proper contents for every mind in the community except the doctor's. We all hate hypochondria and the valetudenarian state of mind, but we do not do all we can in every case to prevent it, for we sometimes forget that our very presence may be the source of it. More and more often as the years go on I find myself obliged to say to patients: "Don't come to me or to any other doctor at all any more unless you get the measles or a broken leg. Until you get your mind off yourself and onto something better worth while you will never be well. Therefore, as long as you keep doctoring you won't get well."

## II.

So far I have been describing and de-



fending three of the chief tenets of mind cure. A remarkable case of the anticipation by a very naive and unlearned mind curist of a psycho-therapeutic practice now sanctioned by the leading neurologists of our day is seen if we compare:

FREUD'S PSYCHO-ANALYSIS AND ORTHODOX MIND CURE.

Some years ago I used to talk with a very successful practitioner of mind cure—a Mrs. Dresser, of Boston—and among the many curious things that she told me I remember especially her description in which, as we might diagnose internal concealed hemorrhage, she would discover an *internal concealed sorrow*. Some gnawing jealousy, half concealed for years even from the patient herself, some supposed slight, brooded over secretly and poisoning happiness, some half-acknowledged **sense of shame for a physical defect**, or for a supposedly unpardonable error, long before forgiven and forgotten perhaps by everyone but the sufferer herself—some such *foreign body* in mental life, my friend the mind curist believed, might be the source of unhappiness and of ill health for many years. Yet it might, she said, by appropriate treatment [the nature of which I never very well understood] be wholly removed, the hidden sorrow plucked from the memory.

Of course, I did not believe it and saw no reason to do so until I began to hear of the writings of Janet, and Freud, and of their highly scientific methods of psychoanalysis. I will quote a few passages from an exposition of their views by Prof. J. J. Putnam, who holds the chair of neurology at Harvard.

"It has been found that painful experiences are often enabled to work mischief just because they are hidden from the patient's view." The aim then ought to be to bring back the hidden experience into clear consciousness, so that its real significance can be estimated, after which

the reorganization of the disordered forces of the mind is likely to take place of itself. Sometimes the result thus arrived at can be attained by inducing the patient to talk at length and in full detail about all the circumstances connected with the onset of his illness. \* \* \* In a certain sense, it may be said that the hands of the clock are thus turned back to the date of these events, and that the patient is made to live over again that period of his life. Under these circumstances one can deal with him as one would have been glad to deal with him at that time, but with the difference that he is now more in the mood of responding favorably to encouragement and to reassurance. His weakness and fatigue may indicate that he is carrying a burden that is unseen."

Does all this sound to you very fanciful and mystical? Then remember that you are listening to a paraphrase of the words of one of the greatest neurologists since Charcot, and further that these conclusions are the result of many remarkable therapeutic successes attained through the uses of the methods and conceptions here suggested. It is now solid science, and we have been verifying its results at the Massachusetts General Hospital.\* But do not let us forget that the mind curists preached and practiced these doctrines long before we did, and that even now the mind curists are still and for a long time will probably be the chief practitioners in this field. Let us acknowledge, therefore, their scientific insight and their present public service, even if we conceive that they only revived the practice of full and free confession—often good for the body as for the soul.

### III.

Turning now from the positive doctrines and practices of Mind Cure to their

\*See article by Linenthal and Taylor in Boston Medical and Surgical Journal, November 8, 1906.

criticism of medical men, I will instance first a habit of ours in the treatment of neurotic patients, a habit which I venture to phrase as

#### SITTING ON THE SAFETY VALVE.

One of the justest causes of complaint that the mind curists have against our profession is that our conception of the psychology of the sick is often a ludicrously simple one, based chiefly on the analogy of a fatigued muscle which needs inactivity in order to recuperate. Rest is our far too universal formula: "Do less; don't work; don't worry; live like a vegetable; empty your mind of its troubles; be calm and quiet," we say.

We try to turn the lights down and let the energies cool off, to mitigate the ardor of the patient's nature and slow down the activities of his life.

If you think that this is often effective, remember what you felt the last time you were angry when someone said: "Now keep cool, don't get mad." Remember on the other hand how often we have succeeded in getting calmness by walking off or riding off irritation—that is, by finding another outlet by the distracted energies. How often and how uselessly we say: "Don't worry—just stop thinking." The folly of it is first that it is impossible—no one ever checks thought save by substituting other thought; and, secondly, because in many cases the worrying activity is one that will corrode and disintegrate the character and so the bodily health unless it be given some outlet. We are *sitting on the safety valve* and inviting an explosion. The useless worrying energy must be set to work. It cannot be abolished.

In other cases the danger is not so much like sitting on the safety valve as like turning a flaring gas flame very low in a draughty room. You don't want it to flare, so you turn it prudently low. Look

out that a passing gust doesn't blow it out altogether! We prescribe the vegetative existence, the absence of all excitement and irritation, and some day it appears that in turning so low the fires of life we have abolished the desire for life itself and with it the possibility of recuperation.

In this vein Stevenson satirizes gaily the life plan of the eminent chemist who was so cautious about the dangers of existence that he came finally to go about in tin shoes and subsisted wholly on tepid milk.

We run to negatives, to prohibitions, and exclusions, forgetting the 365 kinds of mischief that Satan finds in a year for idle hands to do—aye and for idle brains, emotions, affections, too.

More often than not we should "speed her up," teach the patient to live harder, faster, more intensely, or with some better reason for his activities. It is only by enriching their interest that we can make some patients forget their sufferings; with others it is only by providing a satisfactory outlet for their perverted energies that we can prevent internal friction and its protean shapes of misery.

Typical of the mistake I am now describing is the tendency to think of neurasthenia as "nerve fatigue." In nine cases out of ten these patients are born tired, and the more they rest the more tired they get. *Nothing but work will rest them.* It is not overwork but internal friction that wears them out. They are eating their own heads off like an unused horse, or more accurately, like gastric juice, which if its affinities for proteid are unsatisfied will attack the stomach wall. "Unsatisfied affinities" is a much better formula for neurasthenia than "tired nerves." We shall live to see the rest cure largely supplanted by the work cure—a cure not simply by driving the patient, but by helping him to find his own kind and degree of



work, and thus his proper satisfaction and his own kind of health.

The mind curists have steadily insisted that neurasthenia was a disease of character and curable by proper mental training. We are fast coming around to the same position. It is one of the greatest services of that epoch-making book Dubois's "Psychic Treatment of Nervous Disorders," that its author insists throughout that neurasthenia and the neuroses of various organs are essentially mental diseases.

If there is a man in this audience who has not read Dubois's book, and if by coming out here to Denver I can make him read it, my trip will be by that fact alone made worth while. For though Dubois's book has very decided faults it is the first readable treatise on scientific mind cure, written by a well-trained physician as the fruit of twenty years' experience. Dubois is not aware apparently of how many of his doctrines were previously preached by the mind curists, nor are the mind curists likely to perceive for some time that Dubois has put mind cure for the first time upon a basis and in a form that will appeal to educated, critical people.

Mind cure for Dubois is not absent treatment nor hypnotism nor the use of placebos and other quack remedies but simply *education*. Education fitted to the needs of the neurotic and carried out largely by the neurotic himself when once it has been started and thoroughly explained to him by the physician.

The treatment of every case begins with a thorough and searching physical examination and with the exclusion of every organic disease that is subject to treatment by ordinary physical and pharmacological methods. Then the whole matter, including the method of treatment, is explained to the patient, and his co-operation so far as possible obtained.

Reasoning, encouragement and above all practice are the methods chiefly employed. There is no hypnotism\* and very little suggestion in the technical sense, but *self suggestion* by the patient himself to himself is the chief method of removing false auto-suggestions. No apparatus and no special methods are used. *Conversation* is the very simple word used by Dubois to describe his treatment. "I relieved him," he says, "in three conversations." In some cases isolation is used to reinforce or continue the effect of the conversation. Diet and general hygiene are most carefully attended to, and drugs are given whenever clearly indicated, but for that awful trio of neurasthenic symptoms, anorexia, insomnia and constipation, he does not use drugs.

In this country the mind curists were the first to proclaim the efficacy of this sort of treatment, but it has been used for years by Dr. James J. Putnam and Morton Prince, of Boston, and of late by Dr. Barker in the wards of the Johns Hopkins Hospital.†

#### IV.

Another criticism (and on the whole a just and healthy one) which is fired at us like hot shot in a steady stream by the practice, and, to a lesser degree by the preaching of the mind curists, is this: You doctors work hard to cure the alcohol habit, the cocaine and the morphine habit, but there is another habit which you do not sufficiently discourage, namely, the "doctor habit"—the patient's tendency to go on doctoring month after month for ills that doctors cannot cure.

#### THE DOCTOR HABIT.

How little likely are the doctors to

\*I am not condemning hypnotism, which I believe to have a distinct place among the various psychotherapeutic procedures. I merely state Dubois' practice.

†Barker: American Journal Medical Sciences, October, 1906.

cure it or even to recognize its existence! You do not expect the valet to note the harm his very usefulness does to his master as increasing helplessness and forgetfulness settle down on his brain. We do not expect the mother with her first child to see the harm she does by her devotion to its every call and wish. We expect to have to force upon her understanding the news that the child is better off if left alone and uncomforted on the occasion of some of its outcries.

A rude push, an apparently (perhaps actually) unsympathetic criticism by an outsider is needed to teach her that her devotion can do harm.

So it has needed and still needs the rude, even fanatical criticism of the mind curists to teach us again and again as fast as we forget it that we may do harm to our patients by maintaining in them the doctor habit. When patients keep sending for us and gratefully depending on us, can we have the heart to break away, especially as our brother physician across the street may snap up the case? Most of us are so glad to find ourselves in demand that the financial benefit is only part of the reason why we stick to our patients so long as they will stick to us. It is not pure selfishness in us. It is in part a genuine desire to ease suffering, to bring change and comfort into our patient's weary, monotonous life, and of course *in many cases this is precisely our duty*. The jeer of the mind curist is often wholly uncalled for. But my point is that among the numerous false accusations against us, there are some that are true, some persons in which we help to create and to maintain the "doctor habit."

Patients who desire the doctor to make very frequent visits even when there is little or nothing that he can do or watch for, can be divided in three groups:

(a) Those whom we must visit very frequently for a time in order to educate

them *out* of a doctor habit previously acquired.

(b) Those who can never be educated out of the doctor habit, who are pauperized past recovery, and in whom, therefore, we can work some comfort and no harm by allowing them to continue the habit.

But besides these two groups of persons whom the doctor is justifying in petting and humoring, there is a third:

(c) Those, namely, who are not incurably perverted, who could be cured of the habit, yet who are not receiving from their physicians any of that rigorous, tonic treatment which should end in their getting free of doctors and doctoring altogether.

Here the doctor must often seem cruel, as the mother who lets her peevish child cry, seems cruel.

It is here that the undeserved but therefore all the more effective criticism of the mind curists is justified and productive of public benefit.

So far from urging our patients to brace up and give over doctoring, we sometimes take offense when they give us up, and make it really difficult for them to do so until by long use we become, as Chancellor Draper\* of New York recently said, 'a piece of the family bric-a-brac.'

#### V.—THE PHYSICIAN AS A CAUSE OF DISEASE.

But the mind curist attacks us not merely because we do not always do all that we might to get the patient out of our care and out of the habit of calling in the doctor for every little ache or fidget which he might have prevented or disregarded.

He accuses us also of being active *causes of disease*. Can there be truth in this hard accusation? I'm afraid there is.

\*Draper: Quoted in *Journal of the American Medical Association*, Oct. 6, 1906, p. 1120.



I do not refer to the occasional cases of infectious disease carried by a doctor from patient to patient, nor to the bungling surgical operations which leave a patient worse than he was before. These are rare in comparison with the less striking but more chronic and incapacitating maladies known as *neuroses*, in the production of which the physician is, I think, very often to blame. When the neurosis is connected with an accident and with the hope of damages obtainable by litigation it is more often the lawyer than the doctor who is to blame. The class of neuroses in which physicians most often do harm and produce or prolong symptoms, owing to his disregard of mental laws, is that connected with some trifling local complaint for which *local treatment* is given.

Local affections of the female generative organs, of the throat and nose, and of the stomach, maladies which under **judicious mental treatment** would disappear or fall into the background are by local treatment made greatly worse because the patient's attention becomes directed constantly to one part of her anatomy.

A harmless floating kidney is accidentally discovered, operated on, and thereby a first-class chronic invalid is added to the list. A uterine displacement or slight erosion is discovered and local treatment follows because of the law which seems to be deeply impressed upon most physicians' minds (at any rate in my part of the country): "Whenever you find a local lesion treat it locally." There follows a severe case of the type of hypochondria sometimes known as "uterus on the brain," and familiar, I am sure, to you all. What the mind curists have helped us to recognize is that aside from abscesses, hemorrhages, cysts, effective obstructions and malignant disease, the vast majority of local lesions especially in the female pelvis are harmed

by local treatment and helped most by getting the patient into good general health, physical and mental, which includes getting her mind off herself, her symptoms and her physicians, and onto something much more important.

The incessant search for anatomical lesions as a basis for supposedly functional disorders will never cease, and never ought to, but it is equally important that some of us should direct our attention in the opposite direction and strive to discover how much suffering and disability in diseases with a well recognized pathological basis [diseases of the heart, lung and kidney, for example] is due not to the organic and usually incurable lesion, but to the psychic, often removable perturbation of the patient.

Besides looking for the anatomical basis of supposedly functional disorders we should search for the psychic and functional basis of much of the suffering present in organic diseases. By attention to such matters as this we shall not cure disease, but we may diminish that which chiefly concerns the patient—her suffering. In the suffering due to all disease, organic as well as functional, there are two elements, one contributed by the lesion itself and one contributed by what the patient thinks of it, associates with it, fears and apprehends from it. This latter element is especially to be searched for in every case of organic disease, because it is often the only curable part of the disease. As long as we fail to do this the mind curists will deserve the gratitude of the community for the course they are now pursuing.

## VI.

Another just criticism upon our work is that we do not allow for the possibility of a

### PSYCHICAL HARM FROM PHYSICAL DIAGNOSIS AND TREATMENT.

It is often said, and on the whole very

falsely said, that a little knowledge is a dangerous thing. Did you ever reflect upon the fact that this so-called danger is one that every one of us incurs every instant and always will incur until we become omniscient? The condition of possessing a little knowledge (a very little in some fields) is the unfortunate plight of every being on this earth, and since the danger is one that we cannot possibly avoid or prevent, it is rather misleading to call our attention to it at all.

But there is another and very curious result of the possession of a little knowledge, so paradoxical that we hesitate to admit it, yet so familiar that we hardly notice it. The very fact that you *do* know a little about your friends and their interests prevents you from finding out any *more*. Topics enough come up to make it easy to talk with them on the familiar lines of past conversation, and so you never get any further. The possession and familiarity of a 'little knowledge is just what prevents you getting more.

So in the study of human nature we are so *familiar* with the fact that the mind influences the body that we hardly make any use of this knowledge. That shame makes us blush, that thinking of saliva makes it flow, are facts so familiar that we forget them. When fright makes a man's eyes stand out, his hands tremble, his heart beat fast and his skin sweat, we think nothing of it, but when a man comes out of his first battle with all these physical manifestations of terror fixed upon him for weeks or months (that is, with the disease exophthalmic goitre), we hesitate to believe that a purely psychic blow could so profoundly wound the functions of nutrition and secretion. Yet it is essential that we should appreciate this if we are to give a proper place to psychic influences as one of the elements in the relief of this condition.

One of the common blind spots in the physician's eye results in a failure to rec-

ognize the harm done by his treatment or even by his diagnosis through their influence on the mind of the patient. We are most of us watchful and cautious about prolonged examination of a patient with *pneumonia*, because we realize that the position necessary for the examination may exhaust his scanty strength. But when it is a question of serious harm to the mind of the patient, as a result of our treatment we are often skeptical or careless. A young girl of strongly hysterical tendency was attacked by an acute articular rheumatism which (as later appeared) did damage to one of her heart valves, although compensation was quickly established and remained perfect. Later, in Venice, an Italian physician called for some slight disturbance, listened to her heart, became much interested in its condition, and so prolonged his examination that her apprehensions were thoroughly aroused. As a result she rapidly became bed-ridden and the prey of torturing hallucinations which took over a year to disappear.

Later when she came under my care, knowing that I was especially interested in diagnosis and in diseases of the heart, she called my attention particularly to the condition of her heart and awaited my verdict with feverish eagerness. Luckily I had a pretty intimate knowledge of her character and temperament, and so, concentrating myself in the effort to get the essentials as quickly as possible, I listened not over three seconds to her heart, recognized a well-compensated mitral stenosis and got away again so quickly that it was easy to reassure her as to the *functional* soundness of the organ. Accurate diagnosis is of great value, but it may be of even greater value to bear with our ignorance for a time rather than upset a neurotic patient to the extent inseparable from certain examinations.

Later this same patient came to me with a request for pelvic treatment. By



inquiry I satisfied myself that her symptoms were too indefinite and unlocalized to justify pelvic examination, far less treatment, but she soon found an eminent gynecologist who treated her thrice weekly with no benefit to her pelvis and obvious detriment to her general condition. He would doubtless be treating her still had not the family (who had to pay the bills) interfered.

In diabetes or chronic nephritis we should often like to examine a patient's urine every week or two, but in many cases the therapeutic guidance to be obtained in this way is more than overbalanced by the harm wrought through the anxiety of the patient about his "tests" week by week.

This is even more obvious and more often forgotten in regard to the effect of treatment. Take for example the modern treatment of phthisis. You gentlemen have often enough had reason to warn us of the East against sending a patient to Colorado in hopes of a cure by climate and altitude when the conditions in his lungs and the condition of his pocketbook made it sure in advance that the journey will prove a tragic failure.

But we have not been warned as we should be against sending patients to a place where they are sure to become so bored, so depressed, so sick of life and of themselves that their chances of recovery are seriously endangered. First appetite, then sleep fails; then climate, altitude and even good food are mockeries. Because some persons are relatively impervious to the depressing influences of idleness, ugliness and the presence of other tuberculous patients, we do not recognize the sensitive type of person in whom the good of air and food is likely to be wholly neutralized by the spiritual starvation and spiritual asphyxiation which this particular patient is sure to undergo. Meteorological data from treatises on climatol-

ogy are copied into our articles and textbooks without any *supplementary* information on such details as whether there is any earthly interest in the otherwise desirable place, whether there is anything to do, anything not depressing to look at, any people not depressing to scratch acquaintance with, any amusements, entertainments or occupations of any kind to fill the days. To take away a man's work and set him on his back in a steamer chair for months at a time is almost as violent a wrench as to take away his food and try to nourish him by the bowel. It may be necessary and it may be successful, but we ought to realize that the tuberculous patient is being put through a course of treatment that may demand moral heroism on his part, and therefore to do all we can to mitigate the barrenness of his outlook. In sanatoria for the tuberculous the problem of occupation is beginning to force itself upon the attention of those in charge, because the patient becomes oftentimes so homesick that he refuses to stay out the period necessary for the arrest of his disease.

From another point of view the neglect of the psychic side of the tuberculosis problem was recently brought home to the *Boston Society for the Relief and Control of Tuberculosis* by the difficulty of getting some of the cured cases back to work. They had loafed so long that their moral backbone had begun to weaken. To tell a patient to "just live like a vegetable" is a command doubly dangerous, first because it may not work at all, and secondly because it may work altogether too well. Even for the sick man moral laws hold.

#### SUMMARY AND CONCLUSIONS.

1. The mind cure movement has rendered notable public service because its main ideas are important and, in spirit if not in their letter, true.
2. The mind cure movement exerts a

force of healthy criticism upon the physician's tendency (a) to ignore the possible aggravation of disease by the mental effects of the methods of diagnosis and treatment which he uses; (b) to encourage the doctor habit, and (c) to treat neurotic cases either by an attenuated and diluted mental regime or by "sitting on the safety valve."

### EARLY DIAGNOSIS AND TREATMENT OF TABES DORSALIS.

By G. E. NEUHAUS, M. D., Denver.

Tabes Dorsalis, or locomotor ataxia, is by far the most common of the diseases of the spinal cord; and as, with the increase of syphilis, it is becoming more frequent, it is important to be prepared to recognize it when present. After ataxia has fully developed, a diagnosis can, as a rule, be made at a glance; and even during the first stage, there will rarely be any difficulty, provided this disease is kept in mind. Nevertheless, it is not at all uncommon to see cases go unrecognized until ataxia has developed; and the patient has passed into the second stage.

The large majority of cases of tabes follow a typical course; and some of the characteristic symptoms of the disease can almost invariably be found very early. If only two or three of the classical symptoms can be shown to exist, the diagnosis becomes certain. These symptoms are—reflex iridoplegia, diminished or absent patellar and Achilles tendon reflexes, and well-marked lancinating pains.

Reflex iridoplegia, which exists in at least 80 to 90 per cent. of all cases, is the most important, and one of the very earliest signs of tabes, as well as one of the most easily recognized. It consists in the loss of contraction of the pupil when the

eye is exposed to light, while contraction is still present on converging and accommodating the eye for near objects. The importance of this symptom makes the greatest care in the examination of the pupils imperative. Have the patient face a window; tell him to look at a distant object and to keep his eyes adjusted for distant vision even when you cover them. Then, after a few seconds, cover one eye with the hand, and observe. Normally the pupil of the uncovered eye will now dilate. Test the other eye in the same way. If there is any doubt about a prompt dilatation, proceed to the next test. Have your patient in the same position, again looking in the distance. Tell him to cover one eye with his hand, while you cover the other for a few seconds. Then remove your hand and quickly observe the contraction of the pupil. This will in most cases be sufficient to determine whether or not the pupils react normally; but should any uncertainty remain, the test can be made more delicate by having the patient in the dark. Then, with a mirror, throw a ray of light from either a window or some artificial source into the eye to be examined, being careful to do this as much as possible in the direction of the axis of the eye.

Reflex iridoplegia may be present in one eye only, or in both. If the case is seen early, the reaction may be still present, but sluggish. If it is absent, the pupils are, as a rule, also abnormally small, which condition is called myosis.

The eye furnishes us still other important early symptoms, in the dimness of vision complained of by some patients, which is due to a progressive atrophy of the optic nerve. Easier of demonstration are paralysis of the ocular muscles, causing double vision, and ocular vertigo. These paralyzes are, as a rule, of short duration, but recur at variable intervals. They vary in degree and may affect one,



or almost all of the muscles of one or both eyes.

Of late years, auditory disturbances, as ringing in the ears, and diminution of acuity of hearing without any local changes, have been repeatedly described.

Not quite so reliable as reflex iridoplegia but only second in importance, is the absence or diminution of the tendon reflexes. Also an early symptom, it occurs in 90 to 95 per cent. of all cases, and can be easily demonstrated. Before concluding, however, that the patellar reflex is absent, it is necessary, in making the test, to get the patient to relax his leg muscles, either by employing the so-called re-enforcement, or by diverting his attention in some other way. If no contraction of the quadriceps can then be either seen or felt by the hand applied lightly, one is justified in assuming the absence of this reflex. In some instances, the Achilles reflex disappears before the knee-jerk. As there are rare instances when these reflexes are wanting normally, or on account of the presence of some other disease, their inequality is more significant than their absence.

Very important diagnostic data are to be obtained from the sensory sphere. The lancinating, lightning pains of tabes occur in paroxysms, most frequently at first in the lower extremities—the calves, the shins, the dorsum of the feet, and the thighs. They recur in the same place at intervals, an attack lasting hours or days at a time. They may, with each new attack, reappear in the same, or in a different locality. They are described by the patient as being of a stabbing, burning, or wrenching character and generally of great intensity. He may refer to them as being situated in the skin or in the muscles, the bones or the joints. There may be one painful spot, or there may be several. The attacks may occur spontaneously, or they may be brought on by

exertion, by fatigue, or even by emotion. They are so very characteristic that they should never be mistaken for anything else; yet, through being at times brought on by exposure to wet or cold, or by a change in the weather, the patient, and sometimes even his physician, may take them to be rheumatic. Neuritis alone should ever cause any difficulty, as the pains may be of the same character, and the knee-jerks either diminished or absent. Yet even here there are sufficient points of difference. The pain of neuritis is always associated with some of the nerve trunks or their branches. Pressure will increase it materially; and in severe forms, only the slightest touch will be tolerated. The pain of tabes is not as a rule bound to the distribution area of any nerve trunk; and while slight pressure often increases, firm pressure mostly diminishes it. The numbness, the tingling sensation, and the trophic disturbances of neuritis also follow the course of the inflamed nerves. If a mixed nerve is affected, muscular atrophy and reaction of degeneration will finally result.

A patient seen recently illustrates very well the difficulties met in some instances. This man, who had been ill two or three months, was unable to stand with his eyes closed, and had great difficulty in walking on account of apparent ataxia. In addition, he complained of pains in his legs, and of formication and numbness in his fingers. As the patellar reflex was entirely absent, and the Achilles only slightly present, the diagnosis of tabes in the second stage looked very convincing. Closer examination, however, failed to reveal any further signs of tabes. The pupils reacted to light; the plantar, the cremasteric, the bulbo-cavernous reflexes were all present. The patient had never had any bladder or rectal symptoms, no crises, and there was no area of sen-

sory disturbance whatsoever. His joint sensation and his sense of position was also normal. The pains of which he complained were not very severe, but almost constant, and a great many nerve trunks were tender on pressure. The subsequent course of the case proved the correctness of the diagnosis of multiple neuritis, due to an obscure cause.

Among the symptoms of the first stage are those belonging to the genito-urinary system, and occurring in 80 per cent. of all cases. The patient may have to wait an unduly long time before he is able to urinate, or after a while the stream may suddenly cease to flow. Others, on the contrary, are unable to hold their urine, as soon as the slightest desire arrives or even the thought to urinate occurs. These symptoms are sometimes so slight as to be unnoticed by an unobservant patient, and have to be elicited by close questioning. Those of the genital sphere, as a rule, are earlier appreciated, as the contrast between the undiminished sexual desire and the diminution of potency is quite marked. The most careful examination of the genito-urinary organs will reveal no pathological condition, unless complications exist—except very often an extremely significant anesthesia of the urethral mucous membrane.

I have had under observation a patient, who for several years had suffered from periodical attacks of retention of urine, accompanied by intense lancinating pains in the lower extremities. He had been treated for six months by sounds and irrigation of the bladder, for stricture and a cystitis, which he undoubtedly had; but even after he had been freed from these conditions, the attacks of pain continued—not quite as severe, it is true, but still with remarkable regularity. This man gave a history of syphilis, and examination showed the absence of the patellar, and the diminution of the pupillary, reflexes.

Another of the early symptoms of

which the patient often complains, is fatigue of the lower extremities after very slight exertion—which is very noticeable in comparison with his former ability to take long walks. We might mention here a symptom which is not very frequent, but which is sometimes the first to bring the patient to the physician—the man who has never had any difficulty in locomotion suddenly finds his legs give way under him, and falls unexpectedly and apparently without cause; while a moment later he will regain his power and be able to walk.

Patients will often volunteer the statement that their legs and feet feel as if they had gone asleep, or as if ants were running over the skin. The soles of the feet, especially, feel numb, and the patient consequently has the sensation of walking on cotton or on a carpet. Again, he may feel as if a tight girdle or band encircled the ankle or the legs. This girdle sensation, however, is most often first felt on the body below the navel, and all gradations of it are met—from an undefined painful sensation, only in part encircling the body, to a feeling as if a tight girdle were actually present—so tight as to cause suffering.

A great many variations of these typical subjective symptoms are found in different cases. The numbness and other sensory symptoms may affect the upper extremities; this occurs in patients in whom the disease affects the upper portion of the cord rather than the lower, as is usually the case. In others, pressure over the peroneal and ulnar nerves sufficient to cause pain in healthy subjects will be easily tolerated; and again, the numbness may affect the perineal and genital region first. To mistake these symptoms for manifestations of neurasthenia is impossible if the patient can be shown to present either the Argyll Robertson pupil, or any disturbance of the deep reflexes.

The demonstration of objective sen-



sory symptoms is time-consuming, and fatiguing to both patient and physician; but in cases of doubt, where one finds other symptoms of tabes, though the pupils still react, it is indispensable. Should horizontal areas of diminished pain perception or hyperesthesia be found in the thorax or abdomen, or circumscribed areas of analgesia, the diagnosis "Tabes" is fully justified. These areas occur most frequently over the pectoral muscles, in the inguinal regions, around the umbilicus, and over the shoulder blades. In the lower extremities, the inner and anterior surfaces of the thigh, the anterior surface of the leg, and the soles of the feet, are most often affected. Recent observations have shown that these circumscribed areas of lost or diminished pain perception are very frequent and very early symptoms of tabes.

The value of these early sensory symptoms is well illustrated by the case of a man who gave a history of periodical attacks of gastric pain, with nausea and vomiting, lasting a day or two at a time, and attributed by him to biliousness. An examination of his stomach contents was negative. He had areas of analgesia over the pectoral muscles, the scapulæ, and along the posterior surfaces of the arms; while his knee-jerks were somewhat increased, and the pupils reacted to light. The diagnosis "Tabes" was made in this instance on the strength of the symptoms and the history of syphilitic infection, and was confirmed by the later development of Argyll Robertson pupil.

The crises of tabes are the symptoms most apt to give rise to mistaken diagnoses. A patient is suddenly seized, perhaps after some trifling indiscretion in eating or drinking, with severe gastric pains, vomiting at first food, then mucus and bile, but rarely blood. In severe attacks he rapidly passes into a condition of complete collapse. These gastric crises

last for hours, in most cases for days, and have been known to continue intermittently for two or three weeks at a time. They may be easily mistaken for hepatic colic, for the passing of a stone from the kidney, or for almost any of the acute abdominal disorders.

Recent observations, especially those of Determann, have shown that the crises occur also in rudimentary form, as repeated attacks of simple cardialgia, of nausea and vomiting without pain, of pyrosis, or of attacks of salivation. These latter symptoms are certainly of too indefinite a nature to point to anything but some form of obscure stomach trouble; while the fact that the crises occur in this form before becoming typical emphasizes once more the necessity of testing the knee and pupillary reflexes as a part of every routine examination.

Any portion of the intestinal tract may be seized by crises. In the case of the small intestine they occur in the form of repeated sudden attacks of diarrhea with or without pain; in that of the rectum, in attacks of severe pain, often with tenesmus, but sometimes without.

Cardiac crises, consisting of tachycardiac attacks, with prostration, or angina-like attacks; laryngeal crises, where the patient is seized with a sensation of constriction in his throat, a dry, spasmodic cough, or by an attack of asphyxia with respiratory stridor, winding up with cyanosis and unconsciousness; vesical crises, and those affecting the testes or clitoris, can only be mentioned to show the multiplicity of symptoms one may meet in tabes.

Of the trophic disturbances met with in the early stage of tabes arthropathies and spontaneous fractures are the most important and interesting. A patient of the writer's, a city salesman, presented himself with a swelling involving the metatarsal joint of the right foot. He had

been going about with this trouble for several weeks, without any discomfort to speak of, except that he was unable to wear a shoe. The usual rheumatic and rest treatments had been tried without effect. This man admitted previous syphilis, and had typical Argyll Robertson pupils.

These joint affections are almost entirely painless, and develop very rapidly—often over night—generally to enormous size. They lead, in the end, to atrophy of the joints, the formation of adhesions, and, in extreme cases, to destruction of the joints. Just as painless are the fractures which occur not infrequently in this disease, and are also not rarely the first symptom observed. It is only necessary to recall that these fractures take place as the result of trifling causes—a patient may break his femur by simply turning in bed—and that they are painless, to characterize them sufficiently to preclude mistake.

Although tabes may, as we have seen, appear in many different forms, there is hardly any excuse for having patients go on to ataxia before a diagnosis is made, if the common early symptoms are borne in mind. To recapitulate, these are: lancinating pains, crises of varying kinds, vertigo, and cystic disturbances. Early objective sensory signs are: hyperesthesia to cold on the trunk, analgesic spots on the limbs, easy fatiguing. The changeability of these symptoms is also characteristic—they come and go, to reappear or to have others take their place.

One other aid to diagnosis, which becomes more important as observations increase in number, should be mentioned: the presence of lymphocytes in the cerebro-spinal fluid, obtained by lumbar puncture.

An early diagnosis would, however, be only of scientific interest, were it not that the modern views as to the effect of treat-

ment on this disease are not nearly so hopeless as they formerly were. The men who have seen large numbers of early cases, and have been able to follow them up and watch the result of treatment, are alone entitled, it seems, to voice an opinion; and their claims are that, in many cases, tabes can be arrested definitely; that is to say, the patient never passes into the ataxic stage; that in some other cases decided improvement is possible, so that the patient, with the exception of the loss of his reflexes, is apparently in good health.

At the head stands an energetic, anti-syphilitic course of treatment, first in those cases where tabes is of very recent origin, and the existence of syphilis not too remote; second, in those patients who still show symptoms of an active infection, as, for instance, bone lesions, or symptoms of cerebral or meningeal lues; third, those who are known to have been syphilitic, but have been only inadequately treated. If any of these patients present marked lymphocytosis of the cerebro-spinal fluid, this is to be an additional indication for anti-syphilitic treatment.

As these patients are often, or, as a rule, in poor general health, a tonic treatment is also indicated, as well as placing them under the best possible hygienic conditions. Rest in the open air, with over alimentation and massage with hydrotherapy, similar to the modern treatment of tuberculosis, gives excellent results. For those patients who can afford it, to spend a time in a well-managed institution, under trained supervision, is to be recommended.

A modified rest cure like this is particularly indicated, as the manifestations of the disease seem to attack by preference those organs subjected to excessive use, or to prolonged strain.

The crises, especially the gastric, are perhaps the most difficult of all symptoms



to manage. Their frequency can be diminished by placing the patient on a strict diet, and telling him to avoid indiscretions of any kind. During the attack, the employment of some anodyne can hardly be avoided.

Tabetics are very prone to fits of despondency, and need, above all, encouragement, and the assurance that in spite of the gravity of their disease, their usefulness need not necessarily be diminished; for a great many patients with this disease are in responsible positions, and represent important interests.

#### Discussion.

Dr. Arthur McGugan: Dr. Neuhaus has very wisely set forth the symptoms of value in making a diagnosis of the early stages of tabes, and very carefully outlined the technique in making these different tests. The only point that I would add to that section of his paper is the consideration of the part played by the personal equation in the patellar and plantar iris reflexes, and perhaps in the matter of vesical control. There is no doubt in my mind, or in your minds, that the cardinal symptoms of early tabes is the alteration of pupillary reflexes to light, the presence of lancinating pains, the presence of vesical weakness, and the alteration in the patellar tendon reflexes, the order of importance being as I give them. But we must go further than this: the mere inequality of pupillary reflex or the absence of reflex is not sufficient at all times for our needs. We can estimate the normal reaction for that individual. The mere slowing of the iris reflexes then is of importance.

I believe it is well for us to remember to strip the patient when taking the knee jerk. A reflex that will not show in the movement of the foot will sometimes show itself in a slight contraction beneath the skin.

I do not believe the doctor emphasized the fact—and perhaps he did—that the patient will usually reach us only after the stage of visceral crises have arisen. They will come to us for relief from rectal pains, rectal neuralgia, or for gastric pains, if not for the lancinating pains which they and their friends have always considered as rheumatic pains.

I would like to add, if there is further time, a few words in the matter of treatment. I

believe if the doctor had gone farther with his paper, he would have made some mention of the use of Fraenkel's movement and similar means, for the education of undisturbed centers and paths, thereby increasing the function of locomotion for the patient and rendering him able to take care of himself, and to enjoy life to some extent. I think also he would have spoken of the splendid results we are achieving in the use of hydrotherapy in the care of tabes and of parietic or syphilitic dementia. Personally, I have now for several years abandoned the use of all drugs in tabes, excepting mercury and the iodides in the beginning of the course of treatment, and of such drugs as may be required to meet the patient's discomforts incident to this disorder. I confine myself to the use of dietetics, hydrotherapy, and the use of a very heavy, fat, static spark to diminish his lancinating pains.

Dr. McConnell: I have been very much interested in the early diagnosis of tabes, especially because in the last year I have had two cases of obstinate constipation coming to me that, on examination, I found to differ very much from the ordinary cases of that disorder. I found in these cases that there was less irregularity, and a great change in the condition of the sphincter, which on examination remained patulous after placing the finger in the rectum, and in these cases, although no trouble of the nature of tabes had been found, yet on careful searching for it, I found poor station and improper pupillary reflex, and in some cases, especially one of these cases, absence of the knee jerk.

The question that I would like to bring out in regard to these cases is that this question of constipation with the rectal crises, and their symptoms, is one that causes considerable difficulty to the general practitioner. Constipation is not an easy thing to deal with. Treatment is very unsatisfactory. In one of these cases, on examination I found that the man's underwear was very much soiled with fecal contamination, and mucous matter, showing rather an anomalous condition of fecal incontinence, with the constipation of which he complained. The treatment was very unsatisfactory. I tried all sorts of purgatives, and the question has arisen in my mind whether it would be wise in these cases to use a division of the internal sphincter. I have feared this because of the fact that in the later stages we have anaesthesia of the rectal mucosa, and

in this case we might get incontinence, which would be worse—making the man's state worse than at first. Recently in reading Sahli, I found where he had epitomized Mullin's work on the conditions of interference with defecation and micturition, and he brought out from experiments with dogs, that this was entirely sympathetic, and where the cord had been severed in dogs and the posterior columns sectioned, that after a time periodic evacuation of both bladder and intestines took place, although the only difference from the animal being that the patient had not ordinary control. In these two cases I have seen the patulous condition of the external sphincter and the marked contraction of the internal sphincter, which was so well marked, the dilation was so well marked, that I could see into the rectum without the speculum, and the constipation was most difficult to treat. I would be very glad indeed if in the discussion some light could be thrown, because I am very much interested at the present time in the patients under my own care, and for whom I am not able to do very much.

Dr. Palmer: I feel that we ought not to leave this subject until one form of treatment has been mentioned; not one with which I have had any personal experience, but one brought out by Hammond of New York City. So far as I know he is the originator of this treatment. While some might think it a hobby with him, he has certainly achieved results which are quite remarkable, and shows cases which prove something anyway. He, perhaps as most of you know, uses strichnine in heroic doses, continuously, beginning with 1-60 of a grain, three times per day, until he eventually gets to giving from two to four grains of strichnine per day. The patients tolerate it wonderfully. He does not explain the *modus operandi*; whether it brings about a change in the nutrition in the defective centers, or what; at any rate, he gets results. I just want to mention it as one method.

Dr. Spivak: In reference to the treatment of constipation, in tabetic cases, it does not seem to me to require any different treatment than any other case of constipation. The feeding of the patient has been mentioned by the gentlemen who read the paper, Dr. Neuhaus, and should be very generous. Without generous feeding, no constipation could be broken up. The intestines must be in a condition that would respond to irritation caused by the effect of the residue, and therefore I do not

see any better treatment for constipation in all these cases than the dietetic, which would consist of foods that contain a great deal of what we call indigestible material. Indigestible material in the food is just as necessary for the maintenance of good health, in the healthy as well as the sick, as the digestible part of food, and to prescribe a diet that is absolutely indigestible is harmful in all cases of health as well as disease, and therefore it seems to me the case Dr. McConnell gives—I do not know what kind of diet he has tried, but I certainly think he should try persistently and for weeks, a diet composed mostly of vegetables, fruits and all such things that contain a great deal of residue. Suppose he would give flaxseed, which is given in Germany a great deal. I prescribe a great deal in a good many cases of my own with good effect; a double table spoonful two or three times a day, not the meal, but the seed, given once or twice a day. It is nutritious, when chewed up is pleasant, contains a great deal of residue and will induce peristalsis. The second method of treatment of constipation is the one that Dr. McGugan referred to, and this is hydrotherapy, especially a good one for the lower part of the abdomen, sitz baths, cold baths, one, two or three minutes at a time, once or twice a day is a very good adjunct also in the treatment of constipation of all kinds, and I think they could do just as well in cases of tabes.

Dr. Neuhaus: The Fraenkel treatment was not mentioned because I meant to confine myself entirely to the diagnosis and treatment of the first stage. In the first stage there is no ataxia, which ushers in the second stage. I have not had any experience with the static current, but a great many tabetics respond to anything new that is being tried, which will, for a time at least, prove effective. Suspension, when first tried, had very many enthusiastic adherents, a great many tabetics claiming benefit from it. After a while, when the newness wore off, the results failed to materialize. The case that Dr. McConnell mentioned shows the importance of being alive to the possibility of tabes being present in a patient who complains of chronic or periodical disturbances of the viscera. One of the characteristics of these complaints is that they are periodical, and also very intractable to treatment. I know that in a great many cases we are helped by the treatment Dr. Spivak has outlined as regards constipation, but I think still more would prove re-

fractory to it. I would like to emphasize once more that in all cases where the physician is called upon to treat chronic or periodically returning diseases of the viscera or obscure general conditions he must think of the possibility of *tubercle* being present; the examination of the station, the testing of the pupillary and patellar reflexes doesn't take much time and could be done just as quickly as feeling the pulse, and would often shed a flood of light on an otherwise obscure condition.

### *WRIGHT'S LATEST OPSONIC AND BACTERIAL VACCINE WORK.\**

By GERALD BERTRAM WEBB, M. D.,  
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In 1903 Wright and Douglas showed that the leucocyte by itself was impotent to attack bacteria, but that the blood plasma contained some substance (named by them Opsonin) which prepared bacteria for the phagocytes to devour them.

Bullock and Western, following up this discovery, found that the blood fluid contained a separate opsonin for each variety of bacteria.

For instance, they found that a patient's blood may contain only half the normal quantity of opsonins necessary to combat a tuberculous infection such as *lupus vulgaris*, and yet contain a normal amount of opsonins to combat *staphylococci* as in *furunculosis*.

Added to our known substances in the blood which are antagonistic to bacterial life, such as agglutinins, bactericidal substances and bacteriolysins, we now have opsonins which are the connecting link to Metchnikoff's phagocytic ideas.

The amount of opsonin is measured by incubating together an equal quantity of

a patient's serum, with an equal quantity respectively of washed leucocytes from a normal individual's blood and an emulsion of specific bacteria in a capillary tube.

After appropriate time this is removed and the contents spread on a glass slide and stained. The number of bacteria taken up by each leucocyte can now be counted and the average compared with that of a healthy person's serum. This ratio is spoken of as the "Opsonic Index."

Wright has rapidly extended this discovery to the aid of diagnosis and as a guide to the treatment of many microbic diseases. A few examples of the first culled from work seen and performed in his laboratory at St. Mary's Hospital, London, will show the values.

Taking 1 as the opsonic index of the normal individual, healthy variations and variations for error are allowed from .8 to 1.2. In the case of tubercle an index below .8 means a person either has tuberculosis or is a candidate for it. Similarly, above 1.2 indicates that disease. A fluctuating index, say .5 one day and 1.3 another, is positive evidence.

Also normal serum when heated to 60° C. for ten minutes should lose all its opsonic power; should it not do so, to tubercle is another evidence of that disease.

Should a patient have a sinus, or peritonitis with effusion, and the question of diagnosis arise, the opsonic index to tubercle of the blood differing from that of the pus or ascitic fluid would be proof that tubercle was the cause.

A case of Wright's now classical is worthy of repetition:

Male patient with ascites and grave constitutional disturbance, age 30:

First examination—

Tuberculo-Opsonic Index	
Blood from finger—serum.....	1.05
Ascitic Fluid.....	.99

Both being approximately the same and within the allowed variations above men-

\*The writer desires to acknowledge his indebtedness to the publications of Wright and Douglas, and of their corroborators, Bullock and Ross, in the compilation of this paper, and wishes especially to acknowledge his indebtedness to the kindness of Professor Wright and his co-workers whilst working in his laboratory.



tioned, report was given that patient was not suffering from tubercular peritonitis.

The clinical symptoms, the age and appearances seen at operation being in contradiction of this verdict, patient was again examined.

#### Tuberculo-Opsonic Index

Serum .....	1
Ascitic Fluid .....	1

With this result the previous verdict was sustained. A post-mortem examination in a few weeks again threw doubt on the verdict, the naked eye appearances of the peritoneum signifying miliary tuberculosis. Microscopical sections revealed, however, typical miliary carcinoma. No primary carcinomatous focus had been discovered, though it was sought for on post-mortem examination.

Whilst I was working in the laboratory, a physician who had been "cured" in an English Sanatorium for Phthisis came to learn the technique of this opsonic work.

As is usual with beginners, he was put to work estimating his own opsonic powers to different bacteria. Coming to estimate his tuberculo-opsonic index, he found it about 1.4. On one occasion a few days later, .6.

This raised his suspicion that, in spite of the absence of all physical signs, he was not "cured," and after several efforts he succeeded early one morning in raising a little sputum which examined showed tubercle bacilli.

I was asked to examine a college boy and to decide the question of his exercise and of his career, his father once having had tuberculous glands.

I could find no evidence of tubercle infection, though one lung apex was perhaps less resonant than the other, and one testicle was atrophic following an orchitis presumably resulting from a saddle bruise when thirteen years of age.

The tuberculo-opsonic index at weekly intervals I found to be

1.7

1.4

1.33

and lastly

.8

and with heated serum .16.

Consulting with Sir Almroth Wright, he greed that the lad must already be a victim, and appropriate steps should at once be taken.

An additional value of the opsonic index of special value to us in Colorado has been worked out in reference to the effect of exercise in tuberculous patients.

An example I watched among the out patients was that of a man who pierced his ankle some years before with an old bone thrown out by a butcher for manure. The patient had had a discharging sinus, on and off, ever since. His index 1.31 indicated the tuberculous nature and he was allowed to walk and the blood examined as follows:

#### Tuberculo-Opsonic Index

Before walking .....	.9
½ hour after walking.....	.88
2 hours after walking.....	.64
4¾ hours after walking.....	.8
10 hours after walking.....	.94
21 hours after walking.....	1.25

This showed that he had "inoculated" himself from his focus of disease and had created, as will be spoken of later, a "negative phase," as shown by the drop of his index to .64 and a later positive phase by the rise to 1.25.

It is this self auto-inoculation which is so unfavorable and detrimental in all cases especially of tubercle, and which we seek to avoid by keeping our phthisical patients at rest.

A case I was asked to take care of in London illustrates this: A woman with initial phthisis did very well with rest

and inoculation treatment, all rales and cough disappearing and weight being gained. After six weeks I allowed her to get up, her tuberculo-opsonic index keeping normal. However, from time to time I kept watch on this index and one day I found it .5 before exercise, .7 after exercise, and the next day 1.64. In spite of absence of physical signs I insisted on patient again keeping her bed, and after getting the fluctuating index quiescent, I again started inoculations.

These cases lead us to the consideration of the application of the opsonic discovery as a guide to the treatment of microbic diseases.

A short historical review will be necessary to clarify the miracles Wright has performed by his administration of bacterial vaccines guided by the opsonic index.

Complicated phenomena follow upon **the invasion of man's body** by pathogenic microbes. The microbe uses offensive weapons to enable it to remain, the body develops defensive tactics in its effort to eject or destroy it. The offensive weapons of the microbe are:

(1) Poisons excreted by it (exotoxines) which pass into the blood, whilst the microbe remains localized.

(2) Poisons set free after dissolution of the microbe (endotoxines); of these two, the latter are commoner and more potent.

The defensive weapons of the body are the manufacturing somewhere of protective substances which enter the blood stream and which can be demonstrated and measured. Ehrlich showed that before a bacterial intoxication happens, the poison must enter into chemical union with some cellular element in the body.

Wright has christened bodies so formed "Tropines" (meaning turning toward and entering into chemical combination with). For instance, tetanus toxine enters into chemical union with nerve cells and is

therefore "neurotropic." The invaded body responds with the development of anti-tropic protective substances. These vary in amount and specificity. In some diseases they can produce a long immunity, in others only transient. This immunity can be induced artificially before infection, so that it is possible to escape some diseases. Jenner started it, and Pasteur, Behring and others continued. As we know it has succeeded in small-pox, rabies and diphtheria. Wright has carried it further to typhoid.

But greater even is the importance of curing after infection, and that brings us to Behring's diphtheria anti-toxin, and thence to Koch's work in tubercle, and last to Wright's principles, which have opened up entirely new fields in the treatment of microbic disease.

Wright works on the principle of curing an infection by material obtained directly from the infecting virus, and this he calls a bacterial vaccine.

His definition of a bacterial vaccine is, "any chemical substance which when introduced into the body causes there an elaboration of protective substances." By means of these vaccines he has shown they produce anti-tropines which can be accurately measured, and that they follow a definite course which he calls "the law of ebb, flow and reflow, and subsequent maintained high tide of immunity."

The ebb is his "negative phase," which follows on the invasion of the body by bacteria *or their products*, and is equivalent to a decrease in the protective substances, perhaps due to changes in the mechanism of production. This negative phase is a period of increased susceptibility to infection, and hence the amount of it is of the greatest importance. Later comes the flow or positive phase, due to increased production of protective substances when the bacteria become destroyed. Then comes the reflow when these anti-tropines diminish but still keep

above the level at the start and equivalent to the maintained high tide.

To use "vaccines" successfully one must time their administration so as to keep patients in the positive phase condition, for if given at incorrect time it is possible to achieve accumulation in the direction of the negative phase, attended with disastrous results as above indicated.

Such disasters attended so often the use of Koch's tuberculin, and nowadays perhaps frequently the administration of so-called anti-streptococcic sera which Wright has shown to be but "vaccines" in disguise.

The vaccines employed are usually made from cultures of the microbe from each individual case, suspended in salt solution and killed by heating at 60° C. for one hour.

A partial summary of the more important bacterial infections that have been investigated by opsonic methods and have yielded to therapeutic inoculations by **appropriate vaccines** safeguarded by the opsonic index are:

I. Due to *staphylococcus pyogenes*: Furunculosis, sycosis, acne.

II. Due to *bacillus coli communis*: Cystitis, many local affections, appendix and biliary sinuses.

III. Due to *gonococcus*: Gleet, gonorrhœa, gonorrhœal rheumatism.

IV. Due to *pneumococcus* (Fraenkel): Empyema, cystitis, antrum supuration.

V. Due to *bacillus pyocyaneus*: Mastoid cases, etc.

VI. Due to *Friedlander's bacillus*: Atrophic rhinitis, empyema of antrum.

VII. Due to *proteus bacillus*: Cystitis.

VIII. Due to *micrococcus Melitensis*: Malta fever.

IX. Due to *Lepra tuberosa*: By use of tubercle vaccine.

X. Due to *streptococcus pyogenes*: Malignant endo-carditis, pyæmia.

XI. Due to *bacillus tuberculosis*: All cases of strictly localized tubercle, especially of lymphatic glands (of which not a case has failed to be cured), subcutaneous tissue, skin, bones, joints and many phthisis cases.

I have seen many examples of most of these mentioned cured, and others fast healing in Wright's clinic, and can accord with his statement that "we have, in the power of raising the anti-bacterial power of the blood with respect to any invading microbe, out of all comparison, the most valuable asset in medicine."

A word in conclusion in regard to the application of these methods to phthisis. To make a pertinent digression Wright found he could not cure cases of lupus until he had first removed the inflammation due to staphylococci. This he accomplished by the appropriate vaccine and then the tubercles healed. An analogy would seem to me to be present in the cure of phthisis, and some corroboration is present in the fact that initial cases due to pure tubercle invasion do well.

Acting on this presumption I succeeded in isolating pneumococci from several sputa and prepared vaccines which I anticipate will subdue inflammations due to this microbe and enable the tubercle vaccine to better do its work.

Lawson and Stewart, working with tubercle vaccine (Koch's new T. R.), found it absolutely impossible to judge the correct and opportune times to inject this, apart from the opsonic index in the phthisical patients in their sanatorium.

The plan of campaign to be followed then with our phthisical patients is to first transform a general infection into a local one by rest and so preventing auto-inoculations which are unmeasured, ill-timed and detrimental.

Measure the opsonic index to tubercle.



pneumococcus and any other micro-organism which might be present, such as "catarrhalis" or "staphylococci," and at opportune times inject our corresponding vaccines.

#### Discussion.

Dr. William C. Mitchell: I have listened with a great deal of interest to this paper. I would like to say, that ten years ago Dr. Webb commenced his bacteriological work with me in the laboratory, and I am very glad indeed to get this message, ten years later, from Europe.

As to the term opsonic index, it comes from the Latin word *opsono*, *opsonere* meaning to prepare a meal of food for, and **opsonins** are those substances in the blood which act on the bacilli and enable the phagocytes to englobe them and digest them, so that opsonic index work is regarded as the latest phase in the subject of phagocytosis, and it has a great bearing on the subject of immunity.

As mentioned in the paper, we know there are only a few pathogenic bacteria which secrete a soluble toxin. These organisms remain localized; the soluble toxins are carried through the system and thus do their damage. These two organisms are the diphtheria bacillus and the tetanus bacillus. It is very easy to make antidotes for those two diseases, because by inoculating soluble toxins in animals we get corresponding antidotes of these diseases. When we come to consider the other great pathogenic organisms, such as the tubercle bacillus, the pneumococcus, the streptococcus pyogenes, they belong to another group, a group known as endotoxins, and no man has yet been able to separate these toxins from the bacilli themselves, so that we cannot make an antitoxin or antidote for those diseases as yet. However, Dr. Wright has opened up a new line of investigation by which an attempt should be made to elaborate the opsonins to act on the bacilli themselves, so that they may be englobed and digested by the phagocytes. These opsonins are present in normal serum, and can be materially increased by immunization, and, it seems to me, that again is another reason why we should look forward eventually to getting antitoxins for such diseases as tuberculosis and the streptococcus infections.

As was mentioned in the paper, the opsonic index is of great value as an indicator as to how these various vaccines should be used. We have very often discordant results with ref-

erence to the treatment of disease by anti-streptococcic serum. Wright has shown that if we inject a culture of the streptococcus pyogenes into a healthy individual, it is followed by a marked decrease in opsonin, and corresponding with the decrease of opsonin is Wright's negative phase, and corresponding with the increase is Wright's positive phase. According to Wright, if we inject streptococcic vaccine into a patient in the negative phase, we add just that much to the patient's burden and endanger his life that much. If we inject the positive phase when there is an increase in the opsonins of the blood, we increase the chances of combating bacteria and to the recovery of the patient that much.

The method of determining the opsonic index, as has been said, is by taking an equal portion of bullion of the bacterium and an equal portion of the serum to be tested, and an equal volume of washed leucocytes. These are placed in an incubator for half an hour, and then it is centrifuged, and the leucocytes carefully examined for the number of bacteria which they contain. That gives the opsonic index for healthy blood, and any deviations which a patient's blood may exhibit from this are minus or plus, as the case may be.

The opsonic theory has been brought forward to explain a very difficult phenomenon in medicine with which we are all familiar, and that is, how the opening of the peritoneal cavity sometimes and admitting air will cure cases of tuberculosis of the peritoneum. It has been brought forward by Hektoen and others, who say that opening the peritoneal cavity and admitting air changes the opsonic index from minus to positive, and this enables the serum of the patient to act on the tubercle bacilli and let them be englobed by the phagocytes.

Dr. R. C. Cabot, of Boston: I feel that I owe an apology to the society for trespassing upon its time now. However, there are two points that impress me in connection with this work. First, extreme difficulty of the technique. Anyone who has attempted it at all will have a sober respect for these difficulties; not that it is in any way impossible, but from my own experience I have sat down and worked for several hours before I was prepared to do anything in opsonic technique. The other point is that this is homeopathy, pure and simple. Opsonic work is homeopathy and nothing else. It is like cures like, and that the toxin of the disease administered at the right time helps to cure the disease.

# Progress of Medicine

## INTERNAL MEDICINE.

EDITED BY

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### RESULTS OF THE OPIUM-BROMIDE TREATMENT OF EPILEPSY.

Kellner has had ten years' experience with the Opium-Bromide treatment of epilepsy and publishes his results in the *Muenchener Medizinische Wochenschrift* (number 48, 1906). His patients received opium three times a day, beginning with 0.05 (adults), and increasing by 0.01 each second day until the 50th day three doses, each 0.29, were given and on the morning of the 51st day, 0.3. Noon and evening of the 51st day a dose of Potassium Bromide 1.00, Sodium Bromide 1.00 and Ammonium Bromide 0.5 was given; on the 52nd and 53rd days 6.00 were given (3 doses); 54th and 55th days 7.00; 56th and 57th days 8.00; 58th day 8.00; 59th day 9.00, and continued at this dose.

During the opium cure, three times daily one teaspoonful of a 1 per cent. solution of hydrochloric acid, and when indicated (rarely) Carlsbad salts. Occasionally, according to stomach and appetite, Bismuth was given instead of the acid. The diet was simple, mostly vegetable and spices were forbidden. Much time was spent in the open air and during the opium cure no employment was allowed.

During the opium cure baths as follows: First day, 24° C. ten minutes, 2nd day 23° C. nine minutes, 3rd day 22° C. eight minutes, and so until the eighth day 17° C. three minutes, continued to the 15th day; 16th to 23rd 17° C. four minutes, 24th to 31st 17° C. six

minutes, 32nd to 50th day 17° C. six minutes.

Eighty patients have completed the cure, or rather began it, but in sixteen the cure was interrupted because the patients could not take the opium. In six patients (7.5 per cent.) no improvement; diminution of the frequency and severity of the attacks in 23 (29 per cent.); prolongation of interval to several months in 13 (16 per cent.); apparent cure in 22 (27.5 per cent.); time since cure one patient, 8 months, 21, two to six years.

Usually the treatment should be carried out in a hospital and very weak patients and those with permanent mental deterioration should not be selected for treatment. The best results were seen in patients between the ages of 15 and 30.

W. J. B.

### ACUTE EXACERBATIONS OF GRAVES DISEASE.

W. Gilman Thompson (*American Journal of Medical Sciences*, Dec., '06) reports the result of a study of 80 cases of Graves disease with particular reference to acute exacerbations. Three important facts are elicited: (1) The frequency of serious acute febrile exacerbations with cardiac dilatation. (2) The common association of these with tonsillitis; and (3) the possibility of mistaking the highly toxemic clinical picture for such acute conditions as malignant endocarditis or general septicemia.

The temperature was generally high and remittent—sometimes intermittent—and lasted from a few days to several weeks.

In one in four cases, the attack was accompanied or preceded by tonsillitis or quinsy and half as many by bronchitis, severe coughs and colds, influenza or pneumonia—these possibly being a cause of the acute toxemia. The course of the temperature, the dilated over-acting heart

with murmurs, sweating, eruptions, edema, dyspnea, delirium and nervousness make the analogy with malignant endocarditis almost complete—especially if there is no exophthalmos. He incidentally mentions favorably Rogers-Beebe serum in these attacks. O. M. G.

#### ACCIDENTS FROM EXPLORATORY PUNCTURE.

George G. Sears (*American Journal of Med. Sciences*, Dec., '06) strikes a warning note against the claim of harmlessness of exploratory puncture of the chest, by reporting from observation and recent literature ten fatal cases from simple needle puncture. In eight of the cases the needle had penetrated solidified lung.

From a study of the cases, the conclusion is drawn that the sudden syncopal symptoms are due to afferent impulses conveyed to the medulla by the vagus, whose terminal fibers are rendered unduly sensitive by compression or inflammation and are irritated by the needle,—the pulmonary rather than the pleural fibers probably being responsible.

Death may be immediate or preceded by several days of unconsciousness or convulsions, due to the cerebral anemia produced by cardiac inhibition and low blood pressure. O. M. G.

#### SCOPOLAMIN-MORPHIN IN ANESTHESIA.

V. Pleth (*St. Louis Med. Review*, Apr. 28th, '06) believes that scopolamin-morphin has earned a permanent place as an adjunct to general anesthesia, but condemns very strongly the attempts to produce general anesthesia with it alone.

He administers scopolamin hydrobromide gr. 1-100 and morphin gr. 1-6 to 1-4, hypodermically one-half to one hour before the operation, then a very small amount of chloroform completes the anesthesia.

There are no untoward after-effects,

and it is considered safer than ordinary anesthesia. A death has, however, been reported in a boy of 15 years, from Morph. gr. 1-5 and scopolamin gr. 1-120 repeated in an hour. O. M. G.

#### SURGERY.

EDITED BY

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#### THE HYPEREMIA TREATMENT OF SWOLLEN JOINTS.

Dr. E. H. Bradford, drawing his conclusions from a number of cases of swollen joints of varying etiology, is a warm advocate of the method of treatment known as the hyperemic, or the Bier method. He finds that hyperemia artificially produced, whether by baking, stasis (Bier method proper), or suction, is applicable in the majority of joint cases. Of more particular therapeutic value is this method of treatment in those cases properly termed "Arthritic," as distinguishing them from those of specific etiology wherein the epiphyses are attacked by the destructive invading process. In these arthritic cases,—the pathologic changes are less acute and seem to be brought about by fibrous changes in the periosteal and periarticular tissues, with fibrous degeneration of the cartilage and resulting changes in the joint tissues, characterized serially by absorption, degenerative atrophy, abnormal and exuberative growth. The hyperemia treatment is not efficacious in cases of destructive osteomyelitis, whether of tubercular, streptococcic, or staphylococcic origin.

The basic physiological principle upon which this method of treatment rests is the well established principle of inflammation itself, namely, that hyperemia stimulates the absorptive power of the circulation. It is, then, rational to assume that, if it is possible to stimulate the absorptive power of the circulation around the affected joints, degenerative



changes will be delayed or checked, edema will diminish and absorption may be promoted. In producing passive hyperemia by stasis, by a constricting band applied above the affected joint, care must be exercised to prevent too great constriction with resultant anemia instead of hyperemia. (*International Clinics*, Vol. 3, 1906.)

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PRELIMINARY NOTE ON A RATIONAL OPERATION FOR THE RADICAL CURE OF INGUINAL HERNIA.

Dr. A. N. McGregor, Glasgow, Scotland, points out the comparatively unsatisfactory status of present operative procedures and describes an operation based upon a more thorough knowledge of the anatomy of the parts involved. The pertinent anatomical factor which seems to have been hitherto generally overlooked is this, that "the blood supply of tendons and fasciæ is derived from the surrounding and penetrating layers of areolar tissue, the fibrous tissue receives blood vessels but they are inconsiderable both in number and size as compared with the mass of tissue to which they belong. The lymphatics, however, are in great abundance in the enveloping areolar sheaths of tendons and aponeuroses." It is therefore obvious that the tendons and fasciæ are dependent for their nourishment upon their sheaths or covering layers, namely, the areolar tissue; and it likewise follows that the removal of the over and underlying areolar tissue from the fibrous insertions of the external and internal oblique and transversalis muscles, such as is commonly done in the present radical operations, deprives these structures of their blood and nerve supply and of their lymphatic connections, thereby delaying if not altogether preventing vital union in the fascial wound.

The operation consists essentially in dividing skin and areolar tissue without

dissection, in fact, as in the ordinary laparotomy; care is exercised in handling the tissues so that the areolar tissue is not torn from the fasciæ; the sac is treated by the ordinary method and the sutures carefully inserted, though areolar tissue and fascia from above downward, through the canal, emerging in front of the cord, then passing in and out of the posterior wall of the canal to emerge below it just above Poupart's ligament, then through the areolar tissue; the suture is outside the cord which occupies a new canal closely covered with fascia. By this method the time of operation is shorter and fascial union not only actually occurs, but it takes place in a much briefer period. The operation commends itself as simple and scientific. (*International Clinics*, Vol. 3, 1906, p. 160.)

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GYNECOLOGY AND ABDOMINAL SURGERY.

EDITED BY

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THE RECTUM IN ITS RELATION TO DISEASES OF WOMEN.

Dr. H. O. Pantzer, of Indianapolis, calls attention to this very important subject in a paper read before the American Association of Obstetricians and Gynecologists. He emphasizes the close anatomic and physiologic relationship between the rectum and the female genitalia, by which a variable influence of the functions of the one is exercised over the other. In susceptible individuals there often arises disturbances for this reason, closely bordering on the pathologic. He mentions the contingent excitation of the rectum during menstruation, which may result in looseness or costiveness of the bowel, sufficient to require consideration. Attention is called to the fact that remedies ordinarily employed for the relief of constipation may be con-

traindicated at the catamenial period on account of their effect on menstruation.

Mention is made of the importance of rectal touch; in advising the young practitioner to employ it to get his first true impression of the pelvic organs in the body. The variable conditions of the rectum as found by both vaginal and rectal examinations are of great diagnostic and therapeutic interest and should invariably be noted. The rectum in the multipara always shows deviations from the normal, connected with the events of parturition, and the puerperium. Remarkable differences are recognized, which certainly have different bearings and should have varied treatment, medicinal and operative. Making due allowance for individual peculiarity, they are, namely: (a) displacement of the rectum, owing to severed attachments or supports; (b) undue fixation by scar bands, inflammatory adhesions, tumors or displaced neighboring organs; (c) different states of dilatation or contraction, of emptiness or fullness; these are combined with atrophy, hypertrophy, or relaxation.

He calls attention to the special significance of the rectal temperature in pelvic disease. It may be anywhere from  $\frac{1}{2}$  to 3 degrees more than the oral temperature.

Feeding and medication by rectum, he states, cannot be over-estimated. The rectum absorbs as greedily as the stomach and when due attention is given to the proper selection of food and medicine, the rectum, in times of disease may exceed the powers of the stomach. Medication by rectum in pelvic disease has special virtues, as, for instance, when sodium salicylate and saline solutions are given, they are taken up by the same lymph channels that carry the bacteria and toxins of disease. Thus, the medicine exerts an immediate antitoxic and diluent effect upon the morbid material. It also greatly stimulates peristalsis and so ob-

viates the need of an oral administration of purgatives. (*American Journal of Obstetrics*, Nov., 1906.)

#### NERVOUS AND MENTAL DISEASES.

EDITED BY

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#### AMAUROTIC FAMILY IDIOCY.

In a study of Amaurotic Family Idiocy by Poynton, Parsons and Holmes (*Brain*, Vol. 29, Part 2, 1906) based upon three observed cases and a consideration of the literature, these writers conclude that there is strong evidence that the affection is a primary disease of the nervous elements. These are affected, not only throughout the whole nervous system, but also in the dorsal root ganglia and in the retina. Not a single normal cell could be found. Cell changes show that proliferation of the neuroglia follows degeneration of the nervous elements. There is no evidence that changed nervous elements resulted from vascular conditions. No disease of vessels is visible, no signs of old or recent inflammation exist. Employment of different methods of demonstration resulted uniformly in showing nerve cells more affected than fibers. In many systems, as in the direct cerebellar tracts, the dorsal and ventral spinal roots and the optic system, there were no visible changes in the fibers, though the cells from which they spring are severely altered. Alterations in nerve fibers are, therefore, regarded secondary. As regards the nerve cells elective stains (Nissl's, Bielchowsky's) show that the interfibrillar protoplasm is much more affected than are the neurofibrils, a condition which suggests that the primary change is disease of the interfibrillar protoplasm.

Concerning etiology these writers believe: (1) the disease is not due to arrested development. If it were so clinical

systems would probably be evident from birth. Furthermore, examination of the brain indicate no greater abnormalities of myelinisation in regions which develop this change later than in those in which this development is completed early in intra-uterine life. (2) The negative results of bacteriological examination in one case and also absence of reaction in the vascular and lymphatic systems such as one must expect in bacterial infection, suggest that the disease is not due to bacterial toxins. Militating against this view also, is the constant appearance of this form of idiocy in the Jewish race and its occurrence within a certain short period of life.

As a final conclusion, these writers opine that the disease is due to some inherent bio-chemical property of the protoplasm of the cells, as a result of which it undergoes certain changes which in turn effects degeneration of the neurone. The cell changes have not the character of a simple atrophy. They seem to be due to an initial excessive growth and later undergo degenerative changes. This fact is not in favor of Sach's hypothesis, that the process is one of abiotrophy (Gowers term to represent an inherent defective vitality of the cell) or of Shaffer's idea, which, in accordance with Edinger's *ersatz-theorie*, assumes that elements which are inherently feeble undergo degeneration when exposed to the strain of life to which they are not normally resistant.

#### OPHTHALMOLOGY.

EDITED BY

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#### TUBERCULOSIS OF THE CONJUNCTIVA.

(*Villard Ann. d Oculist*) Apr. and Aug. 1905. In 1867, Langhans experimentally established the existence of tuberculosis of the conjunctiva, and in 1873 the first clinical observation of a case was reported by Koester.

Up to 1884, the diagnosis depended

upon clinical appearances or a histological examination. Parinand in this year (1884) brought in animal inoculation as the important factor in establishing the diagnosis. The disease is rare, the recorded cases numbering about 150, and 72 per cent. of these were in patients under 20 years of age. It is commoner in males than in females. It occurs in all countries, climates and races. Evidence of heredity is rare. It is a matter of comment that patients affected are unusually robust and in the enjoyment of excellent health. Trauma should not be considered an etiological factor except in the case of direct inoculation, of which several examples are cited. The disease is produced by the penetration and development of the tubercle bacilli into the substance of the mucus membrane of the conjunctiva, the mode of entrance being variously explained. When of endogenous origin, through the intermediary of the blood current, it may be considered as metastatic and secondary. The secondary affection, however, is not the rule, for in at least 60 per cent. of the recorded cases the conjunctival lesion is primary. Vieusse and others believe the disease of the conjunctiva sometimes arises from extension of an unrecognized nasal tuberculous condition. The number of such cases is probably very small. Direct infection, either through a phlyctenular ulcer or through a scratch of the conjunctiva, is a plausible explanation in many cases.

The symptoms of tuberculosis of the conjunctiva are those of a conjunctivitis which shows no tendency to get well, spontaneously or under simple treatment, and which is accompanied by swelling of the lids and enlargement of the preauricular and submaxillary glands. The tuberculous lesions, as a rule, are nodules, usually round or oval, varying in size from that of a pin head to that of a millet seed. In a few cases these nodules re-



main small, and show no tendency to break down, but as a rule they enlarge and undergo caseation, giving rise to irregular crateriform ulcers with indurated bases and edges, and which tend to spread and not to heal. In rare cases several nodules may coalesce so as to form small yellowish gelatinous tumors, or the lesions may take fungating form characterized by thickening and hypertrophy of the conjunctiva over the lids and cul-de-sac. Corneal lesions occur very late. There may be simple cloudiness of the cornea from a tubercle at the limbus; or a scattering of fine granules in the tissue; or a vascular pannus; or ulceration of the cornea leading to perforation.

In 1891, Sattler proposed the following classification of tuberculosis of the conjunctiva from the clinical appearance:

Group I. "Small miliary ulcers which may coalesce, generally attacking the palpebral but sometimes the bulbar conjunctiva."

Group II. "Subconjunctival nodules, not unlike the sago granules of trachoma."

Group III. Florid hypertrophied papillæ and rounded outgrowths of granulation tissue situated in the fornices and springing from the tarsal conjunctiva. The granulations are accompanied by oedema of the lids.

Group IV. Lupus of the conjunctiva characterized by pedunculated excrescences in the fornices of a jelly-like consistency.

Group V. Pedunculated tumors having the macroscopic appearance of papillomata, and those designated by Mitvalski as "true polypus of the conjunctiva."

These different varieties may be con-

sidered as modifications or different stages in development, the miliary and ulcerative being the most frequent, and the other forms more or less rare.

Although spontaneous cure is possible, the disease is a grave one, and if left to itself may cause loss of the eyes or of the patient's life. Under treatment, however, cures have been obtained, even in very advanced cases.

The clinical diagnosis of tuberculosis of the conjunctiva is not usually difficult. It may, however, be mistaken for trachoma, chancre, epithelioma, gummata, Parinaud's conjunctivitis and granulomata. The results obtained by microscopic or bacteriologic examination of the secretions or tissues or by injections of tuberculin are unreliable. Inoculation experiments constitute the only certain means of diagnosis. The technique of Morax and Chaillons, which consists in inserting a piece of the suspected tissue under the skin of the abdomen of a guinea pig, is recommended.

Numerous local applications have been tried in treatment without any definite success. Injections of tuberculin (T. R.) have in some cases given results sufficiently favorable to warrant their continuance, but not of sufficient value to be advised in every case. In the hands of one who is not an expert they are apt to be dangerous. Surgically curettage is usually insufficient and excision to be satisfactory must be complete, while both these methods by opening vessels may give rise to general infection. Thorough cauterization, either alone or combined with curettage, is the best local treatment.

**EAR, NOSE AND THROAT.**

EDITED BY

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**C. E. Cooper, M. D.,**

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**THE INDICATIONS FOR OPERATIVE INTERFERENCE IN MASTOIDITIS ASSOCIATED WITH ACUTE SUPPURATIVE OTITIS MEDIA.**

T. Melville Hardie (*Annals of Otology, Rhinology and Laryngology*, June, '06) alludes to the life saving work in ear diseases being limited to the past 35 years; that to-day every one should be able to decide whether an operation is necessary in the majority of the cases, and in the uncertain cases consultation is available. Rules for the guidance of the inexperienced are difficult to form, owing to the variance in the infection and symptoms. First in importance and the most common symptom in mastoiditis, usually worse at night, is pain of a deep-boring character, that may come on with the ear disease or not until some days have elapsed, or may not appear until the previously profuse discharge from the ear has suddenly stopped. Pain from pressure on the mastoid is a very important symptom, but care is necessary to not mistake tenderness in the canal for bone involvement. Firm pressure is required to locate inflammation deep in the bone. Comparison of the two mastoids should be made. In exceptional cases, mastoid disease exists in the absence of pain upon pressure. Examination of canal and drumhead should always be made.

Marked bulging of the drumhead may exist with a perforation inadequate for drainage. The upper inner wall of the canal is frequently sagging when the mastoid is diseased. Yet the mastoid may be diseased and the discharge free, with no change in the canal wall.

Discharge is frequently profuse. It

may diminish suddenly or stop, while the mastoid inflammation progresses. Bacteriologic examination of the pus is advisable, since infection, due to streptococcus or pneumococcus, calls for early operation, especially in children. The old-time symptom of edematous swelling and reddening of skin of mastoid is often indicative of neglect. When the auricle stands away from the head, after some weeks of disease, "extensive absorption of bone in the process and frequently perforation of the cortex has taken place." Attention is called to marked local increase of temperature.

Percussion dullness in the mastoid is of value if the dullness develops while patient is under observation. Reference is made to Dr. Andrews' test with the tuning fork.

Dr. Hardie regards systematic manifestations as a rule not characteristic. Temperature, pulse and respiration are not materially affected, excepting in children in whom the temperature may rise to 104° F. However, there is usually a slight rise of temperature in adults. Prostration and inertia are suggestive. "Chills, vertigo, nausea, vomiting and sweating are unusual, excepting in the presence of intracranial complications."

Every case of acute mastoiditis complicating suppurative otitis media should have the benefit of preliminary antiphlogistic or abortive treatment before operation is undertaken. Free incision of the drumhead. Cold for not longer than 48 hours to the mastoid. Too prolonged use of ice may mask the symptoms. Analgesics sparingly. Politzer is quoted as advising to wait for 8 to 10 days after onset of mastoid symptoms before operating. The author is not in accord with such an opinion. "The fact that many cases recover without operation does not balance the lives lost through delayed operation."

BANE.

## TWO CASES OF ABDUCTOR PARALYSIS.

George L. Richards (*British Medical Journal*, Nov. 17th, 1906,) believes in reporting all cases. Up to 1900 Wilson (Sept. *Laryngoscope*) published reports of 118 cases which show the mortality to be high and the therapeutics other than tracheotomy to have been futile. Some cases, however, seem to have been benefited by electrical treatments.

The recurrent nerve contains both abductor and adductor fibers. The former are fewer and weaker than the latter and the latter seem to be strengthened when the former are disturbed.

Case 1. Lady, unmarried, 40 years of age. Sharp, barking, paroxysmal cough. The cords on examination found in active motion and during late inspiration came together in the median line. Diagnosis, paresis of the abductors. Ten days later paralysis was present. During expiration the glottis remained open, but during inspiration the cords approximated closely, leaving only a narrow chink. Five days later, dyspnea was very marked. Tracheotomy was performed with relief, but death occurred in a few days from broncho-pneumonia. No autopsy was permitted. The author's opinion leans toward a central lesion as the cause.

Case 2. Girl two and one-half years old. While playing was knocked down by a large rooster and frightened. The evening of the same day she began to cry, lost her voice for a moment and talked hoarsely afterwards. She had dyspnea, no pain and deglutition was normal. Talking was low-toned except when frightened, when it became loud. One windy day was taken out doors and since had more dyspnea. There was a general decline in health and emaciation. On examination, the larynx under chloroform anesthesia, showed both cords approximated at the beginning of inspiration, re-

maining so throughout the act, and only a small chink just in front of the arytenoids. Tracheotomy was performed. The child improved generally, but the cry was harsh and dyspnea followed the removal of the tube. However, later on an attempt was made to remove the tube daily for an hour. This was followed by dyspnea and much struggling, but was persisted in until better tolerated by the patient. The voice improved, the cry became natural and the dyspnea disappeared. Finally the tube was permanently removed, the wound sewed up and no return of the symptoms were noted. The patient wore the tube continuously for nearly four months.

"The etiology here is somewhat curious. A succession of frights seems to be the real cause." "What the pathology here is I am unable to state. It would seem to me to be central in nature rather than peripheral and to be one of those inexplicable conditions in which, through the influence of the central nervous system, distinct interference in function of the parts supplied by peripheral nerves takes place." C. E. C.

## THE TREATMENT OF PERFORATIONS OF THE NASAL SEPTUM.

M. A. Goldstein (*Laryngoscope*, Nov., '06) advocates surgery as the form of treatment best adapted to overcome the disagreeable symptoms associated with septal perforations. In all perforations, regardless of etiology, he finds a retraction of the mucus membrane around the margins of the perforation, leaving a portion of the cartilage uncovered. To the lack of mucosa covering this edge of cartilage he attributes the crust formations, i. e., wherever the cartilage is covered by mucus membrane the patient is not troubled with crust formations, while in the localities where the mucus membrane



is retracted and the cartilage exposed they occur occasioning much distress.

His operation involves some of the technique of the submucous resection and is as follows: The mucosa is elevated on both sides of the perforation a distance of one-quarter of an inch from the perforation margin; a rim of cartilage is then cut away from the edge of the entire perforation. This rim should be sufficiently large to allow the mucous membrane from each side to come together when it will readily unite, leaving a mucous surface where formerly existed a cartilaginous one. This does away with crusting and odorous secretions.

The instruments used are the Freer sharp elevator to dissect the mucosa from the superior, posterior and inferior edges and the same instrument with the operating edge bent forward at an acute angle for the anterior portion. The single-line Ballenger swivel knife removes the rim of cartilage. The operation is successful in his hands. C. E. C.

#### SKIAGRAPHY AS AN AID IN THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE ACCESSORY SINUSES OF THE NOSE.

C. G. Coakley (*Brit. Med. Jour.*, Nov. 17, '06). By means of the Roentgen ray and the technique elaborated by Dr. Caldwell, the absence or presence as well as the height, depth, breadth, multiple septi if any, and situation of frontal sinus can be shown. Diseased conditions may or may not be shown; when they do appear on the negative, however, they resemble fogging, i. e., there will be more of a shadow of the diseased than over a healthy sinus. The outlines of the sinus will not be so clear. Experiments on the cadaver corroborate these findings, in that fluid in a sinus causes a shadow, while dryness does not. Swollen edematous congested mucosa gives the same shadow as fluid.

Coakley believes that with the aid of

the X-ray the type of operation best suited to a given sinusitis may be determined.

The width of the ethmoid cells may be estimated. This is of practical importance bearing on intranasal operations upon the ethmoid.

The information gained about the sphenoid is quite meager, being limited to the size only. C. E. C.

### Constituent Societies

The Medical Society of the City and County of Denver held a regular meeting November 20, 1906, in Academy of Medicine building, which was called to order by Vice President Bane at 8:25.

The Board of Censors reported favorably upon the following, and they were elected to membership: R. F. Lamberton, D. W. Van Gilder, Alfred M. Moore, H. C. Menkel.

Under regular scientific program Dr. H. S. Canby read a paper entitled: "Camp vs. Institution in Care of Tuberculosis." Discussed by Drs. Pfeiffer, Holden, R. L. Taylor, Denison, Beggs, Edson and Canby.

Dr. Bane interrupted the scientific program to speak of the death of Dr. S. E. Solly. Moved by Dr. Denison that the chair appoint a committee to draft resolutions on Dr. Solly's death. Carried.

The following committee was appointed: Drs. Charles Denison, E. J. A. Rogers and J. N. Hall.

Dr. I. B. Perkins read a paper entitled, "Report of a case of Sarcoma in which a portion of the Illium, the Entire Secum Ascending Colon and a portion of the Transverse Colon were Resected. Recovery." Discussed by Drs. Beggs, Shere, Pothuisje, Gibson, Edson and Perkins.

A letter was read from the secretary of the State Medical Society relative to representatives from this society for next scientific program. Moved by Dr. Beggs that the matter be referred to the committee on scientific program, which would take up its duties after the first meeting in January.

The secretary then brought up the matter of revising and printing copies of the by-laws, and on motion of Dr. Beggs, was referred to the Board of Directors.

On motion meeting adjourned.

December 4, 1906.

The regular meeting took place in Academy

of Medicine building, and, on account of the illness of President Burns, and the absence of the vice president, was called to order by the secretary at 8:30 p. m.

On motion Dr. C. D. Spivak was elected chairman. Minutes of previous meeting were read and approved.

The following applications for membership were read and approved, and were referred to the Board of Censors: Margaret Long, Eugene A. Wheeler W. J. Cottrell, Edwin L. Fitch, G. L. Monson, A. DeForest Attwood, J. C. Thurman, Orville D. Wescott, W. C. Crysler, Leander M. Brady, B. F. Stockett, R. H. Denney, L. V. Howard, A. H. Earley, W. H. Heisen.

The scientific program consisted of a lecture by Dr. Arnold Lorand, Carlsbad, on "**Gallstone Disease.**" After this lecture Dr. Denison requested that Dr. Lorand tell us something of the ductless glands, which he did in a short talk of twenty minutes. Moved by Dr. Sewall seconded by Dr. Taylor, that society give Dr. Lorand a vote of thanks.

Some questions were then asked by Dr. Zederbaum about the relation of disease of the adrenal bodies to Addison's disease in tuberculosis, which were answered by Dr. Lorand.

On motion meeting adjourned.

T. E. CARMODY, Secretary.

At the meeting held January 8, 1907, of the **Denver County Medical Society**, the following officers were elected: President, William C. Bane; Vice President, George H. Stover; Corresponding Secretary, Albert Silverstein; Financial Secretary, M. N. McGiffin; Treasurer, W. H. Davis; Board of Censors: D. H. Coover, H. T. Pershing, Mary Hawes, F. G. Byles, E. J. Rothwell; Delegates to the State Society: W. A. Jayne, A. H. Williams, T. M. Burns, S. Simon, M. R. Root, G. A. Moleen, A. S. Taussig. The following Delegates retain office: J. M. Blaine, G. H. Stover, J. M. Foster, C. K. Fleming.

#### Boulder Election of Officers.

At a recent meeting of the **Boulder County Medical Society** the following were elected: President, Charles F. Andrew; Vice President, F. R. Spencer; Secretary, Lucy M. Wood; Treasurer, W. A. Jolley; Board of Censors, W. A. Jolley, F. H. Farrington and W. J. Baird; Delegate, two years, George H. Cattermole.

It was decided to name two representatives for the next meeting of the State Society, one

for the regular program and one for the section program. F. R. SPENCER, Secretary.

By E. F.

Fort Collins, Colo., December 5, 1906.

**Larimer County Medical Society** met in the City Hall, vice president in the chair: Present: Drs. Upson, Purcell, Pankhurst, Taylor, McHugh, Fee, Davis, Norton, H. P. Parker, Alice J. Parker and Stuver.

The minutes of the last meeting were read and approved. The credentials of Dr. E. E. Martin, of Berthoud, formerly of Del Norte, from the San Luis Valley Medical Society, were presented, and Dr. Martin's request to have his membership transferred to the Larimer County Medical Society was granted and he was elected a member of the society. A letter from the Secretary of the State Medical Society requesting that we select some one to read a paper at the next meeting of the State Society was read and action deferred until the next meeting.

Dr. Upson, for the committee on fixing fees for **insurance examinations**, reported that the committee recommended that the minimum fee for all lodge, fraternal organization and similar examinations be fixed at not less than two dollars, and that the committee had reached no definite agreement as to old-line life insurance examinations. The report was received, placed on file and the same committee instructed to get up an agreement and try to get all physicians in the county to sign it, pledging themselves not to make such examinations for less than a minimum sum of two dollars. The committee on **contract practice**, through Dr. Stuver, reported that he had been to see Dr. Fee, and had discussed with him the demoralizing effects of doing contract practice for the families of members of fraternal organizations at a small yearly sum, but no definite conclusion had been reached. The subject of family contract practice was quite generally discussed and Dr. Fee voluntarily pledged himself to the society that he would not do any more of that kind of practice after the expiration of his present contract, which expires in May, 1907. Drs. Stuver and Purcell were appointed as a committee for the society to examine into and pass upon all contracts that any physician in the county might desire to enter into with any companies or organizations in the county. Interesting cases were reported by Drs. Fee, Purcell, Taylor, Norton, Alice Parker, Pankhurst, Davis and Stuver.

The following applications for membership were presented, approved by the admission committee, and elected as members of the society, viz.: Dr. J. B. Clymer, of Berthoud, Physio-Medical College of Indiana, 1896; Dr. Horace P. Parker, Fort Collins, University of Colorado, 1906; Dr. Alice J. Conway-Parker, Fort Collins, American Medical Missionary College, Chicago, Ill., 1900; Dr. Philip A. Davis, Fort Collins, University of Colorado, 1905.

No other business appearing, the Society adjourned.  
E. STUVER, Secretary.

The Larimer County Medical Society met in the City Hall January 2, 1907, Vice President Upson in the chair. The regular order of business for this meeting being the annual election of officers, the following were unanimously elected: Dr. W. O. Upson, President; Dr. T. C. Taylor, Vice President; Dr. E. Stuver, Secretary; Dr. W. A. Kickland, Treasurer; Drs. P. J. McHugh, T. C. Taylor and M. M. Bailey (Loveland) Admissions Committee.

Dr. E. Stuver was appointed to read the paper for the society at the next meeting of the State Medical Society.

Adjourned.

Dr. C. T. Pankhurst, of Fort Collins, has moved to Brush, Colo.  
E. STUVER,  
Secretary.

Denver, Colo., December 15, 1906.

At the annual meeting of the El Paso County Medical Society the following members have been elected officers for the year 1907: Dr. E. R. Neeper, Post Office Building, President; Dr. M. P. Reynolds, P. O. Box 204, Vice President; Dr. O. R. Gillette, Bank Block, Secretary; Dr. P. O. Hanford, Bank Block, Treasurer; Dr. D. J. Scully, Delegate for two years.  
M. P. REYNOLDS, Secretary.

Pueblo, Colo., December 18, 1906.

The last regular meeting of the Pueblo County Medical Society of the fiscal year was held December 18. It was one of unusual importance inasmuch as it was the meeting when the Minimum Fee Bill was adopted, as well as the new constitution and by-laws.

The following resolution was adopted:

Resolved, That we, the Pueblo County Medical Society, endorse the resolutions and recommendations as presented by the Weld County Medical Society, and the Committee of the State Medical Society on Medical Education,

and was adopted by the Colorado State Medical Society at its meeting in October, 1906; and that we urge their embodiment in the state medical law so far as practicable at the next session of the state legislature; especially those sections which favor the requiring of applicants for license to practice medicine in Colorado, that the minimum preliminary educational standard be that adopted by the American Medical Association, and that all applicants take a written examination before the State Board of Medical Examiners without regard to their school of graduation.

We further urge that until the law is so amended, that the state board exercise its prerogative under the present law by enforcing above provisions.

Resolved, further, That we pledge our support to the Legislative League in its efforts in behalf of a pure food law, and that we use our influence with our legislators in favor of such a bill.

Resolved, further, That copies of these resolutions be sent to the State Board of Medical Examiners, to the Secretary of the Colorado Medical Legislative League, and to COLORADO MEDICINE. (Signed) R. C. ROBE.

Introduced December 18, 1906.

I, the undersigned, certify that the above resolutions were passed by the Pueblo County Medical Society at its regular meeting December 18, 1906.

CRUM EPLER,  
(Seal) Secretary.

The essayist of the evening was Dr. P. H. Heller. His subject was **Therapeutics**. The subject was treated unusually well, as it naturally would be, coming from one of such rare experience as the doctor.

The review was by Dr. W. W. Bulette, and was equally interesting.

Dr. C. M. Swartz and Dr. A. L. Skoog were elected to membership.

Applications were received from Drs. W. O. Patterson and A. A. Corbin.

The annual meeting and the election of officers will take place January 8, 1907.

CRUM EPLER, Secretary.

The regular annual meeting of the Weld County Medical Society was held Monday, December 3, in the office of Dr. Hughes. The meeting was called to order at 8 o'clock by the president, and regular business conducted. Reports of the retiring officers indicated continued prosperity and harmony in the profes-



sional ranks. In membership Weld County Society ranks fifth in the state, and first when population and the number of available members are considered. The annual fall banquet and open meeting was made a permanent fixture of the year's program, the afternoon being devoted to scientific work and the evening given over to the worship of Bacchus and other less austere duties. Election of officers for the ensuing year was taken up and the following physicians were privileged to act: Dr. G. Law, Greeley, Honorary President; Dr. T. B. Gormly, Windsor, Honorary Vice President; Dr. C. A. Ringle, President; Dr. W. F. Church, Vice President; Dr. Charles B. Dyde, Secretary-Treasurer; Dr. C. H. Call, Delegate to the State Medical Society for two years.

The following physicians applied for membership, their applications being approved by the Board of Censors. They were duly elected: Drs. J. A. Standring and D. L. Whittaker, of Johnstown; Dr. G. H. Candlin, of Eaton; Dr. A. T. Monismith, of Fort Lupton; Dr. J. F. Dawson, of Platteville; and Dr. A. C. McCain, of Ault.

Votes of thanks were now in order. They were freely and liberally bestowed on the retiring officials.

Dr. J. G. Hughes provided the paper of the evening, a consideration of **Broncho-Pneumonia**. While the subject was fully considered special stress was laid on the diagnosis of the ailment. The paper was well received and fully discussed by many members. Society adjourned at 10:30 p. m.

CHARLES B. DYDE, Secretary.

The annual meeting of the **Fremont County Medical Society** was held in the office of Dr. F. R. Moore, in Florence, Monday evening, January 7, 1907. The following members were present: Drs. Phelps, T. B. Moore, Little, Orendorff, Wade, F. R. Moore, Adkinson, Condit, Williamson, Rambo, and Dr. Ashley visiting. Minutes of previous meeting were read and approved as read.

Dr. Ashley read a paper on **Diseases of the Maxillary Sinus**. It was a well prepared paper, calling attention to the etiology from the dental standpoint, from the rhinologist's standpoint, and also speaking of the many mild cases giving vague, poorly defined symptoms, usually referred to some other cause. Dr. Ashley described Kuster's operation for empyema of this sinus of opening the sinus

from the facial surface by making two bony flaps to be replaced after cleansing and disinfecting thoroughly. The paper was discussed by Orendorff, Moore, Wade, Phelps and others.

**Clinical Cases.** Drs. Little and Moore reported a case of **aneurism of the descending aorta**, presenting the very interesting specimen, together with a complete clinical and pathological report to the society.

The same gentlemen reported a case of **splenic leukemia** in a man with a history of malaria, in whom the blood count showed red corpuscles, 3,400,000, and leucocytes about 40,000.

Dr. Condit reported a case of **spastic paraplegia**, following a severe shock to the nervous system.

Dr. Phelps reported a case of miscarriage at 4½ months, with a cervix so rigid as to almost prevent delivery. After hours of manual effort, the small fetus was finally delivered. The cervix had been very badly damaged by a previous delivery and was evidently a mass of cicatricial tissue.

The following officers were elected for 1907: President, Royal C. Adkinson, of Florence; Vice President, Pitt A. Wade, of Canon City; Secretary-Treasurer, R. E. Holmes, of Canon City; Delegate, W. T. Little, of Canon City; Alternate, J. W. Rambo, of Portland.

A luncheon was served at a late hour at the Idlewild. ROYAL C. ADKINSON,  
Secretary.

La Junta, Colo., December 12, 1906.

The regular meeting of the **Otero County Medical Society** was held at La Junta, Colorado, December 11. Members present were: Drs. Kearns, Edwards, A. L. Stubbs, J. Stubbs and Moore.

The minutes of the last meeting were read and approved.

A motion was made to proceed with the election of officers for the ensuing year and carried. The results were as follows: President, E. G. Edwards; Vice President, J. F. Kearns; Secretary-Treasurer, W. M. Moore.

Dr. J. F. Kearns was elected delegate to State Society for the next two years, and Dr. A. L. Stubbs was named as his alternate.

The society adjourned to meet at the next regular time. W. MILROY MOORE,  
Secretary-Treasurer.

## Other Societies

### Denver Academy of Medicine.

On the evening of December 7, the Fellows of the Academy listened to a very interesting address by Dr. Lightner Witmer, Professor of Psychology in the University of Pennsylvania, who took for his subject **Clinical Psychology**. He traced the present active interest in psychology and psychiatry from its beginning in the clinic of Wundt, through the active and statistical work of his students. He pointed out that the very extensive contributions embodying the results of set methods of examination, and certain elaborate tests to which large numbers of persons were subjected, had but slightly influenced or helped psychology or psychiatry. The tendency was to progress from mere clinical reports to more elaborate and exact statistical studies and generalizations. But this had been pushed too far. The more you work with elaborate schemes of examination, the less valuable the results appear.

Dr. Witmer had been conducting what might be termed a psychologic clinic since 1898. In this he studied, especially, backward children, sent to him mostly from the public schools of Philadelphia. When his examination raised the suspicion of physical defects, the cases were sent to appropriate medical specialists, for the corroboration of the diagnosis and the proper treatment. He thought that medical men were not generally able to give sufficient time to the examination of the patient to make a thorough psychologic diagnosis. He instanced a case, in which after a twenty-minute examination a neurologist made the diagnosis of mental enfeeblement, and advised that the child be sent to an institution for feeble-minded children. An examination continued through a whole afternoon, and at subsequent visits showed that there was little or no mental enfeeblement, and the child had since made practically normal progress under ordinary school training. The diagnosis of mental enfeeblement should be made only after prolonged study of the case.

Prof. Witmer illustrated the subject with a series of case histories. A boy of 16, otherwise bright, had such defective articulation that he could not be understood at all by those unaccustomed to it. He was taught in a few months to make proper use of his facial muscles and articulate perfectly. In a case of spastic paralysis in which extension of the upper extremities could not be secured by the

ordinary exercises, it was rendered complete by taking the patient's mind off his movements and getting rid of the misdirected motor impulses—getting him to forget his customary movements. In these cases there was inability to get the proper motor antecedents, the sensations and memories of sensations, normally connected with the movements it was desired to make.

The power of attention is a fundamental faculty in mental development; real inattention is seen only in the apathetic. Children commonly spoken of as inattentive, are really attentive, but to the wrong thing, or to one thing for an insufficient period. Frequent shifting of the attention is normal in young children. This "natural attention" has to be taken, and by educational processes kept fixed for a longer time on a particular object. Inability to give sustained attention may be due to many physical causes, especially to adenoids in the nasopharynx.

Ability to fix the attention is acquired through discipline at school and at home. In a case recently seen, there was a history of adenoids, and serious lack of the proper discipline in keeping the attention fixed upon the ordinary school studies. Thus the patient, a young man of 21, very desirous of entering college, was in some respects no more fitted for it than a child of 6 or 8.

Prof. Witmer's address was discussed by Drs. G. A. Moleen, Henry Sewall and B. Oettinger. In reply to a question, he stated that in the treatment of stuttering he had commonly used the method of training the patient in conscious correct breathing. He was not sure but that some cases required an opposite kind of treatment, being already too conscious of their respiratory movements.

### Colorado Ophthalmological Society.

A stated meeting occurred November 17, 1906, at the office of Dr. W. C. Bane, Denver, twelve members and one guest being present.

Dr. Edward Jackson presented a boy of nine years with flattened granulations of the tarsus of the upper lids, resembling both **trachoma** and **vernal conjunctivitis**. There was no corneal involvement or purulent discharge; points against the probability of trachoma. The lids had been rolled eighteen months before. Examination subsequent to the meeting showed the disease to be trachoma.

Dr. Bane showed a woman of 70 years, with

a history of recent **detachment of the retina**, which proved to be due to subretinal exudate rather than a sarcoma. The retina was largely reattached, presenting a corrugated appearance. The treatment had been iodide of potassium, 5 gr. increased to 15 gr. t. i. d.

The subject assigned, **Retino-choroiditis**, was discussed. Dr. Jackson reported **choroiditis** in a young woman under observation, probably tuberculous in origin, in which pigmentation had not yet occurred. He said that **tuberculous choroiditis** arose in acute miliary tuberculosis, and was probably as rare in Denver as in any city of its size. He had never seen choroidal disease in persons dying from chronic tuberculosis; but had seen two cases of probable **isolated tubercles of the choroid**.

Dr. A. C. H. Friedman had seen two cases of **tubercle of the iris with choroiditis**.

Dr. E. W. Stevens said that about eighty-seven cases of **tubercular conjunctivitis** had been reported, that he had never seen tubercular choroiditis, and that it was very rare, which was the general opinion of the society.

Dr. Jackson reported three cases of **paralysis of the depressor muscles**, two being caused by syphilis contracted twenty years before. Under potassium iodide the paralysis was fast disappearing.

Dr. G. H. Strader reported a case of **uveitis** following gonorrhea, but persisting for over two years. Removal of pus from the ethmoidal or sphenoidal sinuses by suction, caused clearing of the hyalitis and choroiditis.

Dr. G. F. Libby reported a woman of twenty with acute diffuse nephritis, occurring five years after **interstitial keratitis** in a girl of fifteen; and chronic **pareuchymatous nephritis**, with **neuro-retinitis albuminurica** and a blood pressure of 180 to 200, in a man twenty-six years old.

Dr. E. R. Conant reported a case of **adhesive iritis**, which responded to atrophy, but delirium developed which required specific treatment.

Dr. John Chase, of Denver, was elected to membership.

GEORGE F. LIBBY,  
Secretary.

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## Communications

### A New District Medical Society.

The Clear Creek District, composed of the counties of Clear Creek and Gilpin, have formed a constituent society, known as the Clear Creek Medical Association.

The following physicians constitute the char-

ter members: Dr. George Atcheson, president. Idaho Springs; Dr. John Atcheson, Idaho Springs; Dr. J. A. Morehouse, censor, Idaho Springs; Dr. A. D. Fraser, Idaho Springs; Dr. G. W. McClanahan, Idaho Springs; Dr. Sherman, Idaho Springs; Dr. A. Aberg, secretary and treasurer, Idaho Springs; Dr. A. W. Kirby, censor, Georgetown; Dr. Charles A. Ferris, vice president, Georgetown; Dr. E. V. Graham, Silver Plume; Dr. G. A. Saunders, Central City; Dr. C. M. Froid, Central City; Dr. A. C. Asquith, censor, Central City; Dr. James A. Richmond, Central City.

The list of names includes almost all of the physicians in the district. Dr. Aberg, the secretary, deserves much credit for the excellent work he has performed in perfecting the organization. He has been actively supported by several others, it goes without saying, or such a splendid organization could not have been brought about.

When Dr. Aberg wrote me a short time ago that he believed the time was ripe for organizing a medical society in the Clear Creek District I was greatly pleased, and immediately co-operated with him in every way possible. A meeting was called at Idaho Springs and Dr. J. N. Hall, councillor of the Second District, and myself, went up to assist. We found assembled at the meeting, Drs. Abner, Atchinson, Morehouse, Fraser, McClanahan and Sherman, of Idaho Springs, and Drs. Ferris and Kirby, of Georgetown.

A constitution and by-laws were adopted. This was ordered transcribed in a suitable book. This book was to be sent to the various towns in the district, and the physicians invited to sign it as charter members. How well the plan succeeded is evidenced by the fact that fourteen physicians subscribed to its principles and are now enrolled as members of the Clear Creek District Medical Association, and seek from the Colorado State Medical Society a charter for legal existence and affiliation. I feel sure at its next meeting the House of Delegates will unanimously grant this society a charter, as it bids fair to be one of the most successful societies in the state.

MELVILLE BLACK, Secretary.

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### The Next Meeting Place.

It is now definitely decided upon that the next meeting place of the State Society will be held at Glenwood Springs in the Hotel Colorado. Our society has never met on the Western slope. This year our president is a Grand



Junction man, and since we have talked for a long time of having the meeting in Glenwood, this year was thought to be the best time to have it.

The physicians of the Western Slope promise to make it a success. The Colorado hotel promises to take care of us at a greatly reduced rate. We all know the reputation of this hotel, and many of us remember the enjoyable time they gave us at their expense several years ago. The Glenwood Springs Bath Company promises us free baths. There is good fishing within easy reach.

The meeting opens on Tuesday, the 17th of September, and closes on the 19th. The season for deer opens on September 25, and as Glenwood is one of the best points from which to outfit and start from, the hunters of our profession will find it convenient to attend this meeting, and prolong the recreation by a hunting trip into Rio Blanco and Routt counties.

The railroads have guaranteed a round trip rate of one fare from Denver, which is \$10. We believe a one fare rate, round trip, from all points of the state can be secured. If we can run a special train from Denver we can have a rate, round trip, of \$8.

The Western part of the state has contributed very largely in the past to the success of the Denver meetings. It now remains for the eastern portion of the state to return the compliment by sending a large delegation to this meeting. It is hoped that every married man will take his wife with him; the presence of the ladies is absolutely necessary to the success of the social side of the meeting. The hotel will give us a banquet every evening, which will be followed by dancing. Dr. William J. Mayo has accepted our invitation to be present as our guest, and to deliver an address.

Since Glenwood offers so many attractions as a pleasure resort, it has been decided to have the meetings open at 10 a. m., and close at 1:30 p. m. Luncheon will then be served. The afternoon can be given to recreation.

We want to start the ball to rolling now for the Glenwood meeting. It is well to begin asking the other fellow "if he is going?" If he has not thought of it, your question will start him to thinking about it. Don't begin now by saying you are not going, because you are almost sure to change your mind.

MELVILLE BLACK, Secretary.

## Announcements

### Proposed Institution for the Adult Blind of Colorado.

The following resolutions were unanimously adopted by the Colorado Ophthalmological Society, December 22, 1906:

Whereas, There is an unusual number of accidents in Colorado causing blindness among men engaged in mining and manufacturing industries; and,

Whereas, These blind adults are almost invariably poor, and are thrown upon the charity of the sympathetic public; and,

Whereas, There is no provision for the care and instruction of the blind except for children; therefore, be it

Resolved, That the Colorado Ophthalmological Society, in full cognizance of this need, recommends that the Committee on Public Policy and Legislation of the Colorado State Medical Society endeavor to influence the General Assembly of Colorado to make an appropriation for the construction and maintenance of an institution for the care and education of the blind adults of Colorado.

GEORGE F. LIBBY, M. D.,  
Secretary.

The Western Section of the American Laryngological, Rhinological and Otological Society will meet in Denver on February 16, 1907. An excellent program is being prepared. The Colorado Ophthalmological Society will meet on the same day, and a joint banquet will be served at the University Club in the evening. A royal good time is anticipated.

WILLIAM C. BANE, Chairman.

## New Members

Dr. Eugene A. Wheeler, Denver; Dr. A. De Forest Attwood, Denver; Dr. A. H. Earley, Denver; Dr. D. W. Van Gilder, Denver; Dr. H. C. Menkel, Denver; Dr. R. F. Lamberton, Denver; Dr. Margaret Long, Denver; Dr. A. M. Moore, Brighton; Dr. J. H. Larson, Palisades; Dr. O. E. Coleman, Palisades; Dr. Wm. Zinke, Collbran; Dr. Thadd Parker, Grand Junction; Dr. J. B. Hards, Grand Junction; Dr. P. A. Davis, Fort Collins; Dr. Alice J. Connway-Parker, Fort Collins; Dr. H. P. Parker, Fort Collins; Dr. J. B. Clyner, Berthoud; Dr. E. E. Martin, Berthoud; Dr. Victor B. Ayres, Como; Dr. A. T. Monismith, Fort Lupton; Dr. J. F. Damson, Plattville; Dr. A. C. McCann, Ault;

Dr. J. A. Strandring, Johnstown; Dr. George H. Chandler, Eaton; Dr. D. L. Whittaker, Johnstown; Dr. W. W. Arnold, Colorado Springs; Dr. C. M. Schwartz, Pueblo; Dr. A. L. Skoog, Pueblo; George Atcheson, John Atcheson, J. A. Morehouse, A. D. Fraser, G. W. McClanahan, E. P. Sherman and A. Aberg, of Idaho Springs; A. W. Kirby and Charles A. Ferris, of Georgetown; G. A. Saunders, C. M. Froid, A. L. Asquith and James A. Richmond, of Central City; E. V. Graham, of Silver Plume.

## Deaths

Dr. L. F. Ingersoll, Grand Junction.

## Books Reviewed

**A Manual of Otology.** By Gorman Bacon, A. B., M. D., professor of Otology in the College of Physicians and Surgeons, Columbia University, New York; Aural Surgeon, New York Eye and Ear Infirmary. With an introductory chapter by Clarence John Blake, M. D., Professor of Otology in Harvard University. Fourth edition, revised and enlarged. Handsome 12mo volume of 485 pages, with 134 illustrations and 11 plates. Price, cloth, \$2.25 net. Lea Brothers and Co., Publishers, New York and Philadelphia, 1906.

We have long been familiar with Bacon's Manual of Otology. It has now reached its fourth edition, and has been materially improved by the addition of much up-to-date matter. The work has not been especially enlarged. The author's endeavor has been to continue it as a condensed treatise on the ear and its diseases.

Bacon is to be classed among the conservative authors. In none of his editions of this book has he advocated other than the most tried and proved methods, both as regards treatment and surgery. In his fourth edition he still further carries his teaching into the realm of the practical. Otology, at best, is a subject beset with pitfalls for the unwary, and woe to him who believes he has at his command a method which is superior to all others. We admire in Bacon his honesty and his ability to choose and reject, with a mind unprejudiced, from the vast field of new research. His vast experience enables him to give us facts shorn of tinsel and glamour. Every chapter is replete with personal experience.

His book is not a large one, and yet contains

about all that can be said to be positively known upon the subject of otology. The last chapter is devoted to the methods of preparing smears and of making cultures of pus from suppurating ears. This bacteriological chapter will prove of interest to the pathologist as well as to the otologist. MELVILLE BLACK.

**Operative Gynecology.** By Howard A. Kelly, A. B., M. D., LL. D., F. R. C. S. (Hon. Eding.); Professor of Gynecological Surgery in the Johns Hopkins University of Gynecologist to the Johns Hopkins Hospital; Fellow of the American Gynecological Society, etc., etc. With 11 plates and 703 original illustrations, for the most part by Max Brodel, Associate Professor of Art Applied to Medicine, in the Johns Hopkins University. Second edition, revised and enlarged. In two 8-vo. volumes. Cloth. Pp. 1336. Price, \$15. New York and London. D. Appleton & Co. 1906.

The second edition of this most notable work is before us, and we notice many valuable additions to the first edition, which appeared over nine years ago, adding greatly to the value of the work.

The book has been practically rewritten to keep it abreast of the times. The new chapters which have been added are: Local and Palliative Treatment; Displacements and Pesarries; Menstruation and Its Anomalies; Bacteriology; Use of the X-Ray in Diagnosis; Diseases of Hymen; Abdominal Extirpation of the Cancerous Uterus; and last, but not least, a chapter on Gynecological Diseases in Children.

We take pleasure in recommending this book to practitioners desiring to get the latest and best of modern Gynecology, and we bespeak for it a sale equal if not surpassing that of the first edition. C. K. F.

## Progressive Medicine, Vol. IV, December, 1906.

A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, 349 pages, with 29 engravings. Per annum, in four cloth-bound volumes, \$9; in paper binding, \$6; carriage paid to any address. Philadelphia and New York: Lea Brothers & Company, Publishers.

The December number of this valuable quarterly digest concludes the series of the year 1906. This series constitutes a digest of the

best of the medical ideas advanced. In the present volume the Diseases of the Digestive Tract and Allied Organs is presented by Dr. J. Dutton Steele in a thoroughly comprehensive way.

Dr. William T. Belfield has considered the Genito-Urinary Diseases. His remarks regarding gonorrhea in both sexes are noteworthy.

Diseases of the Kidneys, by John Rose Bradford, M. D., F. R. C. P.

Fractures, Dislocations, Amputations and Surgery of Extremities is treated by Dr. Joseph C. Bloodgood. About ten pages are devoted to the Bier treatment of infections, with hyperemia.

The volume closes with the Therapeutic Referendum, by Dr. H. R. M. Landis.

The work is fully up to the standard of the previous numbers as a valuable digest.

**Prophylaxis and Treatment of Internal Diseases;** Designed for the use of practitioners and advanced students of medicine. By F. Forchheimer, M. D., Professor of Theory and Practice of Medicine and Clinical Medicine, Medical College of Ohio, Department of Medicine of the University of Cincinnati; Physician to the Good Samaritan Hospital; Member of the Association of Physicians, American Pediatric Society, Etc. Cloth, 652 pages. Price, \$5 net. New York and London: D. Appleton & Company. 1906.

This work fills a long-felt want for the busy practitioner. The author, a man of wide experience, has given to the profession the gist of it.

The sentences are short, the thought clear and the treatment of the whole book misses the encyclopedic form by a narrow margin. In spite of this, however, the book reads easily and keeps one interested.

The treatment of disease is dealt with very rationally. One fails to find either the optimism or pessimism, which so frequently destroys the reader's faith in a medical work.

For the practitioner the work can be highly commended. A student, advanced or otherwise, had better purchase a book which deals with the etiology and pathology of disease as well as prophylaxis and treatment. A. S. T.

## Books Received

[All books received will be acknowledged in this column to be recognized by the contributor as the equivalent. Reviews will be made of these volumes according to merit and the interests of our readers.]

**Physician's Visiting List for 1907.** Leather covered, with pocket and pencil. Price, \$1. Philadelphia: P. Blakiston's Son and Company.

**Transactions of the Third Annual Conference of State and Territorial Health Officers,** with the United States Public Health and Marine Hospital Service, May 15, 1906. Washington, D. C.: Government Printing Office. 1906.

**Transactions of the Fourth Annual Conference of State and Territorial Health Officers,** with the United States Public Health and Marine Hospital Service, May 23, 1906. Washington, D. C.: Government Printing Office. 1906.

**Genito-Urinary Diseases and Syphilis.** By Henry H. Morton, M. D., Clinical Professor of Genito-Urinary Diseases in the Long Island College Hospital; Genito-Urinary Surgeon to the Long Island and Kings County Hospitals, and the Polhemus Memorial Clinic. Illustrated with 158 Half-tone and Photo-engravings and 7 Full-page Colored Plates. Second Edition, Revised and Enlarged. Cloth, Pp. 500. Price, \$4, net. Philadelphia: F. A. Davis Company, Publishers, 1906.

**Stenhouse and Ferguson's Epitome of Pathology.** By John Stenhouse, M. D., of the University of Toronto; and John Ferguson, M. D., Toronto, Canada. 12mo, 285 pages, amply illustrated. Cloth, \$1, net. Philadelphia and New York: Lea Brothers & Co., Publishers, 1906. (Lea's Series of Medical Epitomes. Edited by Victor C. Pedersen, M. D.)

**Grayson's Laryngology.** The Diseases of the Nose, Throat and Ear. By Charles P. Grayson, M. D., Clinical Professor of Laryngology, Medical Department, University of Pennsylvania. New (2d) edition, revised and enlarged. Octavo, about 550 pages, with 152 engravings and 15 plates in black and colors. Cloth, \$4, net. Philadelphia and New York: Lea Brothers & Company, 1906.



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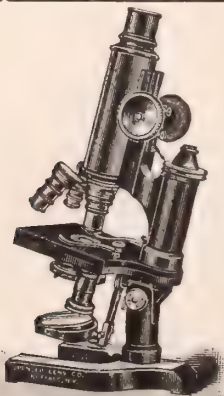
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# COLORADO MEDICINE

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All communications to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are *typewritten*.

Communications and items of interest are invited from all parts of the state. Death notices, removals, changes of address, etc., are especially desired.

Secretaries of the County Societies are earnestly requested to report their meetings, including the subject matter of the papers presented, and in general, the substance of the discussions.

Marked copies of local newspapers, or clippings, containing matters of interest to the profession will be gratefully acknowledged. The name of the sender should be given.

The journal will be issued on the 15th of each month. All copy must reach the editor not later than the first of the month. Advertisements of proprietary medicines will be accepted provided the preparations advertised have been approved by the Council of Pharmacy and Chemistry of the American Medical Association. Address all communications regarding advertising to

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## IMPORTANT NOTICE.

All members of the Colorado State Medical Society are entitled to a copy of this journal each month. Failure to receive the same, and change of address, should be promptly communicated to the editor.

VOL. IV.

DENVER, FEBRUARY, 1907.

No. 2

## Leading Article

### ADDRESS

A NEW METHOD OF DELIVERING THE HEAD IN BREECH CASES AND SOME SUGGESTIONS TO THE COUNTY SOCIETY.\*

By T. MITCHELL BURNS, M.D.

PRELIMINARY REMARKS ON A NEW, EASY AND SAFE METHOD OF DELIVERING THE HEAD IN THE BREECH PRESENTATION.

*Introduction.*—This method is not really a new one; it has probably been used, more or less perfectly, ever since the world began; by the mother herself—when no one was present to assist her, by primitive people in their intuitive period, and by many physicians of to-day. It is a modification of the Prague method

although, as far as can be ascertained, it has never been fully described or recommended in any text-book or medical journal.

My attention was called to this method through a statement of one of my students. He said that a country practitioner, who had had many years of obstetric work, told him (as nearly as I can remember) that, if in breech cases he would lay the back of the child on the mother's abdomen and pull on the shoulders, he would have no trouble in getting the head.

*The Mechanism of the Vertex and Breech Presentations Compared; and Some Deductions.*—In the vertex presentation, as the head is born it is pushed upward in front of the pubes. In the breech presentation, as the trunk is born it tends to pass upward in front of the pubes (toward the mother's abdomen), but the length and weight of the trunk, as soon as much of it is born, causes the breech to sink toward the anus. The main mechanical difference between the head

\*The address of the retiring president of the Medical Society of the City and County of Denver. Delivered at the annual meeting, held January 8, 1907.

and the trunk is the difference in length, i. e., if the trunk were of the same length as the head, it, coming first, would be delivered the same as the head, when it comes first.

In the vertex presentation, when the head is born, the uterus can readily contract upon the long fetal trunk and expel it. In the breech presentation, when the body is born, the uterus is empty, and, having nothing to contract upon, there is difficulty in expelling the head.

In the left occipito-anterior position of the vertex presentation, the mechanism is easier and more perfect than in the other positions. In the breech presentation, the head passes down through the pelvis flexed, as in the vertex presentation; the same antero-posterior diameters of the head meet the same diameters of the pelvic cavity which they do in the vertex, but in a reversed order; the occiput rotates anteriorly as in the vertex; when on the perineum, the head is thrown forward, as in the vertex, the occiput pivots upon the subpubic ligament and the same antero-posterior diameters of the head pass out of the inferior strait and vulva, as in the vertex, but in a reversed order.

In the vertex presentation, when the forceps are used and the shoulders are large, severe traction may usually be made upon the neck without harm.

From the foregoing facts regarding the mechanism of the vertex and breech presentations, I have drawn the following deductions:

I. As, in the vertex and breech presentations, the head passes through the pelvis, with practically the same diameters in relation to the pelvic cavity, and, as the left occipito-anterior position gives the easiest and safest mechanism in the vertex presentation, the left sacro-anterior position should give the easiest and

safest mechanism in the breech presentation.

2. If, in the vertex presentation, the head is pushed upward in front of the pubes and extended, and, in the breech presentation, nature attempts to carry the trunk upward in front of the pubes and to extend the head, being prevented only by the length of the trunk, there is no reason why art should not assist nature and carry the trunk upward in front of the pubes and on the abdomen with extension of the head.

3. If in forceps cases, when the shoulders are large, traction on the head rarely injures the neck, the same amount of traction on the trunk, in breech cases, should rarely injure the neck.

My clinical experience (ten cases during the last year) has fully confirmed the preceding deductions.

*Preparatory Technique.*—Before the breech reaches the vulva, the patient is placed in the obstetric position (i. e., in the dorsal position, cross-wise of the bed, with the feet upon chairs), and the perineum is stretched, first with the operator's fingers and later with the fist.

When the breech does not fully dilate the cervix, manual dilation is used.

In original breech cases, if seen sufficiently early, and in cases following podalic version, the fetal breech is brought down so that the fetal back and occiput will be toward the left side of the maternal pelvis, and so that the long diameter of the head—the antero-posterior—will enter in, or nearly so, the transverse diameter of the inlet. The transverse diameter of the trunk is kept in the antero-posterior diameter of the pelvic cavity until the arms and head are in the pelvic cavity, i. e., until the shoulders are out of the vulva.

When the fetal arms become extended, the operator's hand, toward which the



fetal abdomen is directed, is introduced into the vagina, posteriorly, and then carried upward along the front of the fetal abdomen and chest to the outer side and back of the posterior fetal arm, which is brought down over the face; then the outer side and back of the anterior arm are reached (without the operator removing his hand from the vagina) and this arm brought down; the operator's other hand is used on the mother's abdomen to push the fetal arm into the operator's hand in the vagina. [In this method the operator's hand is introduced where there is the most room; it is so applied to the fetal arm that traction toward the face is easy; the operator's hand is only introduced into the vagina once and the hand on the abdomen often easily carries the fetal arm to the vaginal hand of the operator.]

*The Method.*—As soon as the shoulders are born, the fetal body is lifted upward and the fetal back is laid upon the abdomen of the mother. An assistant is asked to grasp the fetus by the feet and pull, with considerable steady force, towards the mother's head. The operator, facing the vulva, grasps with both hands the fetal shoulders, placing the palms on the front of the shoulders and the fingers on the upper part of the shoulders; then, with such steady force as may be necessary, pulls, pushing the shoulders directly against the front of the pubes and toward the lower abdomen. The head is delivered slowly, when the fetus is not asphyxiated and there is danger of considerable laceration of the perineum.

The striking difference between this and the classical methods is, that it produces extreme extension of the head instead of flexion; it converts the fetus into a strong immobile rod, and has caused a quick, easy and safe delivery of the head in every case in which we have tried it. (We delivered one head in ten seconds,

after the physician in attendance, who had had considerable experience with breech cases, had worked for an hour trying other methods of traction.)

In case the occiput were toward the sacrum, we should place the patient on her left side and carry the fetal back toward the mother's back and produce the same sort of traction on the feet and shoulders as when the occiput is toward the pubes. (We have not had such a case.)

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#### SOME SUGGESTIONS TO THE COUNTY SOCIETY.

*Introduction.*—Early in the year, I came to the conclusion that it was unwise for the out-going president to write an address in which he told the in-coming president and the society how it should be run in the future. It seemed to me that he should decide, at the beginning of the year, what the work of the society should be and then he could at different meetings inform the society what should be done and work to see that it was done.

Later I found that there were many things which could not be accomplished in one year. So, like my predecessors, I come here to tell the new president and the society what should be done, which we have left undone.

*Charity.*—No person gives as much of his life to charity as does the average physician. Because of this fact it is an outrage for anyone to ask a physician to give money to charity. "Charity begins at home." After a physician has saved enough to warrant a life income to his family he may give money to charity, but not before. Charity does very little toward helping a physician financially; it often gets him a poor practice but very rarely a good one.

*Ethical Drug Preparations.*—Preparations should be considered ethical when the active drugs and their dosage are

stated by the proprietor, and these are found to be correct by the Council on Pharmacy and Chemistry of the A. M. A.

Any preparation the active constituents of which are mentioned, and their dosage given by the proprietor should be considered ethical until carefully examined and found otherwise. Pharmaceutical preparations which are advertised and put up for sale directly to the public should in the main be considered unethical.

*Protection to Manufacturers of New Efficient Ethical Drug Preparations.*—Much should be done to protect the manufacturer of new efficient ethical drug preparations of reasonable price. The duration of such protection, however, should be limited.

*Medical Journals Which Advertise Unethical Preparations.*—Medical journals, which, after fulfilling their contracts for 1906, continue to advertise preparations which are recognized as unethical should not be supported.

*Therapeutics of New Drugs and Preparations.*—Every medical journal should be asked to allow some space for a Department of Therapeutics. In it should be printed articles written by ethical physicians on new and old drugs, prescriptions, proprietary preparations, etc. Articles on drugs and preparations which have been found to be of little use would be especially valuable. Every detail man lauds his goods and tells of the fine results other physicians obtained from their use. When they are tried the same results are wanting; these unsatisfactory experiments could be avoided, if more were written about new drugs and ethical preparations.

*Lay Press Publicity.*—A committee should be appointed whose duty it would be to select specialists to write articles

for the Sunday papers on sanitation, recent advances, prevalent diseases and other subjects of interest to the laity. The articles should be carefully edited by the committee and given to one of the Sunday papers to appear, e. g., thus: Diphtheria and Antitoxin, Edited by the Public Press Committee of the Medical Society of the City and County of Denver.

*Social Committee.*—A committee of three should be appointed to act as a social committee. One of their main duties should be to see that all members know one another.

*Post Graduate School.*—The County Medical Society should be a post graduate school in every sense. It should include (1) clinical lectures and demonstrations; (2) drill in physical examinations and clinical microscopy; (3) classes in the different specialties; (4) clinics at the various hospitals, and so on.

*New Members.*—We should aim to make all the physicians of this county ethical and then to make them members of this society. Whether a physician has been unethical or not in the past may be considered, but it should not prevent him becoming a member. As soon as a member does anything unethical, the Board of Censors should consider the offense and either expel him at once, or warn him that if the offense is repeated he will be expelled.

*A Greater Profession.*—Let us strive to make the medical profession of Denver and Colorado second to none in the world. While we have not the population and large medical schools of the East, we have a climate which calls many of the leaders in medicine to Colorado. With these leaders, with improvements in our schools and hospitals, with a few donations from wealthy physicians and laymen, with an *esprit de corps* and a de-

termination to advance along scientific lines, there is no reason why we should not succeed.

*Thanks.*—One of the happiest surprises of my life has been the unanimous support which the members of this society have given me during the last year. I wish to thank the officers, the different committees, the members who lectured, those who read and those who discussed papers and cases, and no less the other members who simply attended and listened—again I thank you.

## Editorial Comment

### OPSONIC AND VACCINE WORK.

The importance of the results of the work of Wright and Douglass seems to be fast gaining recognition throughout the medical world as the most scientific advance the estimation and treatment of bacterial diseases has yet taken.

Decided impetus was given to the work in this country as a result of Dr. Wright's lecture at the Johns-Hopkins Medical School.

Last month Dr. Webb's excellent review of Wright's work appeared in this journal.

The already abundant literature furnishes extremely fascinating reading, immortalizing, as it were, Pasteur's belief that the day would come when vaccination would afford the means of annihilating infectious diseases.

French (*Practitioner*, July, 1907, p. 71) states that the points established may be epitomized as follows: The variable factor is present in the serum and, so far as concerns its quantitative estimation, is independent of the leucocytes.

Opsonins are distinct from those substances which bring about bactericidal and bacteriolytic reactions.

The opsonin passes from the serum to

the bacteria and acts upon them in such a way as to prepare them for ingestion by the leucocytes.

Variations in the number of leucocytes in the blood do not correspond with similar variations in the opsonic index.

In a large number of infections, *specific* opsonins can be detected in the serum. Opsonins are destroyed by being heated to 60° C. for a few minutes, as shown by Wright, Bulloch and Dean. (Neufeld and Rimpeau, however, contend that opsonins are thermostable.)

The opsonic power of serum *in vitro*, falls gradually, and, even when kept at 8° C. in the dark, falls to half its original value in about ten days.

Out of these facts have grown an inoculation treatment with the use of vaccines.

Wright has given us to understand a vaccine to be "a chemical substance which when introduced into the organism causes there an elaboration of protective substance." These vaccines in use at the present time are simply watery emulsions of bacterial cultivations, centrifugalized, diluted to contain some 500,000,000 bacteria per c. c. sterilized by heating to 65° C. for an hour and sealed in capsules in doses of 1 c. c., until required. In tuberculosis Koch's tuberculin (T. R.) is used, diluted with 0.75 saline. It requires to be sterilized.

The vaccines, with the exception of the tubercle vaccine, consist of emulsions of heated cultures of the particular germ producing the infection. Luxuriant growths of the desired organism are grown upon agar, and, after properly diluting,—which is determined by comparing the proportionate number of germs to blood corpuscles in a mixture of freshly drawn blood, the emulsion and normal salt solution—it is heated to the lowest temperature and for the shortest possible time to kill it. Cultures are then made



from the vaccine thus prepared to insure that it is sterile and safe, and lastly some preservative is added. The dosage is determined and regulated by the "phases" of the opsonic index.

The percentage of failures have been small compared with the brilliant results obtained in conditions which had hitherto resisted all other forms of treatment.

Furunculosis, abscesses, sychosis, gonorrheal infections, together with lupus, adenitis and other tuberculous infections have furnished striking examples of its value. Encouraging results have been obtained in incipient pulmonary tuberculosis.

The time is not yet when we may state the possibilities with certainty, though enough has been accomplished to enlist the interest and attention of the profession generally.

The technic is very intricate and beset with many pitfalls, requiring the most patient, untiring and accurate manipulation to avoid errors in deductions.

It is expected, however, that time and extended observation will do much to bring this now elaborate technic down to a practical working basis when, from the evidence thus far brought out, we may reasonably assume to have added a sound, exact and scientific means of defense against bacterial infections, with a promise of success hitherto unprecedented by any plan of treatment directed against infectious diseases.

---

#### WELCOME, CLEAR CREEK.

It is with much pleasure that space is given elsewhere to the maiden report of our latest born constituent society. The enthusiasm evident in the organization, and the unanimity of purpose is unprecedented. The society organized and disposed of the insurance, contract fee questions, adopted unanimously a fee bill, made provision for protection from dead

beats and have signed up all but one of the practitioners in their jurisdiction within two months' time, which, to our minds, is "going some." Our hearty congratulations are to you, with our best wishes.

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#### A SURVIVAL OF THE FITTEST.

With the establishment of medical journals throughout the United States under control of the State Medical Organizations there is an evident effort at concentration by amalgamation of interests on the part of publications conducted by private concerns. The latest which has come to our attention is the union of *Medicine*, the *Therapeutic Gazette* and *Medical Age*, to be known as the *Therapeutic Gazette*. The *New York Medical Journal* and *Philadelphia Medical Journal* have in the last year absorbed the *New York Medical Times*. One cannot but comment, after a perusal of the journals of State Medical Societies, upon the fact that here is to be found the material which in former years went to the journals of private institution. These facts, in association with the matter, from a medical standpoint, appearing in some of our oldest national publications to-day in our belief warrants the heading and that will be about all for the present. *Detur dig-niori*.

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#### CHANGE OF TITLE.

The pioneer military medical publication in the English language—*Journal of the Association of Military Surgeons*—will be known after January, 1907, as "*The Military Surgeon*." We wish it a continuation of the remarkable success it has enjoyed in the past.

---

Salicylic acid is said to be three times as powerful in preventing fermentation as carbolic acid.

### APROPOS.

The following is taken from the editorial columns of the *Journal of the Arkansas Medical Society*, and would seem to be in evident need in Colorado, and it is therefore reprinted:

---

#### THE MEDICAL KNOCKER.

"There is no profession nor vocation in the walks of life but what has its knockers. When it comes to medical organization there are knockers galore. We suppose that each county society can look over the professional field in its vicinity and find medical knockers inside of the society who pose as members for the sake of being members in name only, and not from an honest desire to better conditions as they exist. It chanced to be our experience one day recently to come in contact with one of these strange composite characters, a fellow who cared naught for his brother practitioners, and, seemingly only cared to rock along in the channel, and rake in the shekels, regardless of the medical organization that existed in his county, and regardless of the county society work being done by his brother practitioners.

"When asked something in reference to the county work, he said: 'Doctor, I don't care anything at all about the medical society. I never attend the meetings. I pay my dues and let those that enjoy keeping up a medical society go ahead. They never bother me, nor do I ever bother them.'

"I asked him if he didn't think that he owed something to the medical profession, as well as to his patrons. He said that his patrons were all satisfied with his practice so far as he knew: that he had as good success as any one else did; he didn't know that he could better himself by attending his society. This indeed, was a reflection on the work done

by his county society: but it showed a disposition on his part to be willing to go along in the same old rut, taking his patron's money without giving them any adequate return in the way of the best services that he could possibly render.

"Is it the fault of the county society in not making their meetings more interesting to this character of man. Is he so strangely constituted that he could not attend any kind of meeting regardless of the program? Our opinion is that he might be termed a medical knocker. A man whose standing room in a county medical society would be worth more than his presence. This man can see no merit in any effort that is being made to further the interests of organized medicine. He can see no good in anything except the little sphere in which he lives. What should be placed on this man's tombstone? As a suitable epitaph, an epitaph that would do him full justice, we suggest this:

" 'Here lies a medical knocker

Whose only purpose was to knock;  
Always an ethical mocker,

His timely demise caused no shock'."

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Sparteine, according to Shoemaker, is claimed to relieve all the symptoms of Exophthalmic Goitre (Graves disease.)

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The galvanic current applied through insulated gold needles, inserted, well into the goitre, the anode at the nape of the neck, and a current strength of 15-24 m. a., enabled Lloyd to report a case as cured after fourteen applications.

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According to Lee, abdominal massage combined with pelvic gymnastics constitutes the most desirable, sure and efficient remedy we possess in the treatment of habitual constipation, especially in persons of sedentary habits.

## Original Articles

### *SUGGESTIONS FOR THE ADMINISTRATIVE CONTROL OF TUBERCULOSIS IN THE CITY AND COUNTY OF DENVER.\**

By HENRY SEWALL, PH.D., M.D.

Many, many directions have been formulated for the prophylaxis and control of pulmonary consumption. Some of these have as a basis only the theoretical cogitations of the easy chair; others are founded upon a true knowledge of cause and effect as illustrated by practical experience. It is the purpose of these few remarks to neglect altogether the consideration of the means to be advised by which the individual patient should conduct himself towards the community, but rather to dwell upon a few important points in which the community may come into definite relation with the patient.

We should have passed the stage of lucubration and entered that of activity in regard to this question.

What are the facts before us? Here is a disease which is universal among civilized races; familiar statistics record that one in seven of all deaths is due to it; we know the morbid agent, the tubercle bacillus; we know that it is of relatively low attacking virulence; we know that even after the seeds have taken root, in the majority of cases the vital powers of the individual suffice, when properly aided, to subdue the advance of or even cast out the intruder. That is to say, the disease can be easily prevented, and, when contracted, it can be often cured. Proof of these assertions could be given with the accuracy of mathematics to anyone who would review the recent work of the Health Department of New York City

in the control of tuberculosis, or the experience with the disease in Philadelphia, especially since the operation of the Phipps' Institute under the stimulus of Dr. Lawrence F. Flick.

The situation in Denver: The social conditions are vastly more favorable to deal with here than in New York or Philadelphia; the urban population and area here are much smaller; there are no slums, properly speaking; we have a climate in which the disease does not so readily outcrop; but the very advantages of climate have attracted hither so large a proportion of invalids that the numerical ratio of infectious tuberculous cases to healthy people is extraordinarily large, and accordingly, the chances of the spread of the disorder are proportionately great.

We are, then, in danger as a community, but the danger is one which, recognized, need have no terrors for us. It is proverbial that it is the unloaded gun which is the source of accidents. Spread the knowledge that we now possess and danger will be shackled by precautions, and the fear of it will disappear. We know absolutely that a person with consumption of the lungs is only a source of contagion through the germs which are in his expectoration. These germs are hurt or killed within a few hours by exposure to sunlight. They are destroyed by fire and by mineral disinfectants. They maintain their vitality in pockets in which are stored infected handkerchiefs. Above all, they abide in the rooms inhabited by tuberculous people who are careless in their habits. In short, ordinary decency in one's habits as to the bestowal of expectoration would of itself almost certainly shut the door on the further progress of the disease. For many years now we have been familiar with these facts, and still infection is undoubtedly spreading in wider circles. What are we going to do about it? I maintain that

\*Read at the Tenth Annual State Conference of Charities and Corrections.



the facts now in our possession, if logically followed out, will give us complete control of this disorder. This belief is founded not on theory alone, but from the actual results in prophylaxis obtained in communities like New York and Philadelphia, where the conditions are vastly more difficult to deal with than here.

What shall we do to render harmless the consumptive persons now among us, and to prevent the imminent spread of the disease? In order to fight an enemy you must know where he is; in order to arrest a criminal you must find him; you must catch your hare before you cook it. Every consumptive, rich or poor, educated or ignorant, is a possible source of contagion. The experience of the Health Department of this and other cities has shown that infectious diseases as scarlet fever, small-pox, diphtheria, etc., can only be properly dealt with by systematic and immediate reports of the same to some central authority which is backed by the ordinances of the municipality. Although the infectiousness of tuberculosis may be vastly less virulent than, for example, that of diphtheria, the means which prove so efficacious in controlling the spread of the one may reasonably be modified to subdue the other.

I believe that this community has reached an elevation in sanitary education in which it would support an official demand for the report of the name and location of every case of pulmonary tuberculosis residing in the City and County of Denver. Such a report would involve no publicity whatever and would take away an important source of danger incurred from the invalid—that which comes from concealment. As infection from pulmonary tuberculosis depends upon the presence of tubercle bacilli in the sputa, there should be appropriated to the Health Department a fund for the microscopic examination of the sputa of sus-

pected persons, free of charge, for by this means the communicability of their disorder would be determinable. Again, knowing as we do that the infective agent of consumption remains alive in the dark for an indefinite time, that, in short, consumption is a *house disease*, special care should be given to the cleanliness of rooms occupied by consumptives; and, above all, every room in Denver should be submitted to sanitary cleansing under the direction of the Health Department when vacated by a tuberculous person. Such an ordinance would work no hardship and there is urgent need of it for the protection of yourselves and your friends. There is scarcely a boarding house in Denver but harbors tuberculous invalids either obviously ill or really infected, but apparently healthy. The intelligent and well-intentioned proprietors of these establishments would soon co-operate with the Health Department in these measures of protection. It would be a lamentable retrogression for us to assume the ostrich policy of our friends of southern California, where the name of tuberculosis is *taboo* but where the disease may bloom as it will under other terminology.

So much for an introduction to the care of the disease among the so-called upper and middle classes.

But it is the indigent poor who specifically claim the attention of this society. It is this class which is especially thrown upon the benevolence of the public and which is least disposed to exercise sanitary precautions and which is most amenable to discipline. It is quite possible for this society to exercise, with very little outlay of trouble or expense, espionage over every consumptive in Denver seeking charity or free medical attention. Such administrative work requires no great ability or originality in its consummation. The necessary routine has been laid out for us in the operation of similar organ-

izations in the East. The detail of this work belongs to the Visiting Nurses' Association. Every charitable body in Denver, every medical dispensary, every doctor, preacher, philanthropist should report to a stated bureau of the Charity Organization the names and addresses of the consumptive poor applying for relief or becoming known to them. A visiting nurse, especially instructed in such work, should at once seek out such a person and establish friendly terms with him or her and put on record certain important *data*. Most such cases can be cared for or care for themselves at their homes or lodging houses. But surely good can be accomplished by letting them feel that they have friends on the outside, and no harm can come from a course of simple sanitary instruction for their own protection and that of their friends and families. When such cases can no longer receive adequate attention at their homes, there are already at hand fair facilities which can easily be made ample for their generous care and segregation at public expense.

We have in our midst an institution supported by taxation which, from small beginnings, has grown into an establishment for charity of which this community may well be proud. For cleanness in its administration, for intelligent efficiency and devotion on the part of its nurses, and for unselfish loyalty among its medical and surgical staff the hospital of the City and County of Denver is without a superior among institutions of its kind. From a close and intimate observation, extending over fifteen years, it has appeared to me that the responsible trustees of the hospital, the Board of County Commissioners, have uniformly, whatever their shade of political opinion or social point of view, devoted themselves conscientiously to building up an institution for the best interests of the community

which they served. There is no doubt that the accommodations of the hospital and its associated Poor Farm will be modified or enlarged according to the reasonable demands of public opinion. At the present time indigent consumptives who are seriously ill are admitted to the hospital on the same terms as other patients. No finer work of charity can be conceived than this care of bedridden and, usually, hopelessly afflicted persons who are still keenly alive to mental and physical suffering. When it is realized, in addition, that the segregation of such patients removes from the general community just so many foci of infection, this method of their disposal must be recognized as a necessity of public protection. At the present time no special provision can be made at the hospital for the care of this class of cases. They must be scattered, according to the available accommodations, throughout the wards. Such a condition of affairs is not permitted in most other well-regulated general hospitals. Indeed, private general hospitals commonly pursue the brutal policy of arbitrarily refusing admission to such cases. Such a policy for us is not only impossible, but would be insanely self-injurious. Our county hospital should not only admit, but should welcome to its protecting care all indigent, bedridden consumptive cases. The experience in the hospital has shown that not infrequently the physical condition of such inmates so improves that nursing and constant medical attention are no longer necessary. The patient is then transferred to the Poor Farm, an excellent sanatorium situated 18 miles from Denver, where ideal facilities are offered for recovery from the disease in the purest air that exists. Out of 2,369 patients cared for at the County Hospital from Dec. 1, 1905, to Dec. 1, 1906, consumptive patients numbered 183. It is clear that this

number would have been considerably increased with adequate facilities. During the past eleven months the average number of patients daily at the county poor farm was 130, of which 16 only were of the consumptive class.

What recommendation suggests itself for making adequate the facilities of our hospital to the demands of our social conditions? I answer, we must have a special building appropriated to the care of male and female consumptive patients, a building capable of accommodating at least fifty people. Only in this way can this peculiar class of invalids be given the intelligent care which humanity and their disorder demands. The objection against such a measure, which may be urged by those who hold the purse-strings for the public is obvious and well taken.

Already this community has suffered much by having thrust upon its charity a large contingent of helpless consumptive paupers from abroad who, actually, now and then have been known to seek entrance into the county institution from the very railway station. It is feared that should it become known that we take good care of our indigent consumptives we would be overwhelmed with a horde of helpless creatures sent here to get the benefits of the climate without expense to themselves or the communities from which they emigrate. It seems to me there is, as time goes on, less and less occasion for such a fear and that a fair exercise of administrative intelligence would easily obviate the danger of such an influx. In the first place, eastern communities are to a great extent establishing hospitals and sanatoria for the maintenance of their own tuberculous invalids. In the second place, the cordial and intimate relations which exist or may be established between the various municipal and charitable organizations of the country make it unlikely that one would willingly im-

pose upon another by the transfer of its public charges. In the third place our Visiting Nurses' Association presents us with the means of preventing such imposition.

At her first visit to a consumptive patient the nurse should discover the financial status of the invalid; she should inquire into the period of residence in Denver and last place of residence, and, above all, by whose advice the invalid has sought this section. Then, from a bureau of this or other authoritative organization, correspondence should be opened with the individual or society thus imposing on our charity, stating the situation and demanding support for their impecunious charges. Such a demand being ineffectual, the widest publicity should be given to the circumstance and the stigma of public disapproval be directed to the individuals or societies thus prostituting the name of charity. Individuals who, by their own initiative, become a charge on our community, fall into the class of vagrants and may, in extreme instances, be dealt with as such and returned to their place of origin.

To italicize the few suggestions here made for the controlling of consumption in Denver, among the mass of details necessary in the scientific treatment of this problem, there is advisable: First, a complete registration of names and residences of all persons living in Denver who are afflicted with tuberculosis; second, under ordinance of the city there should be a thorough disinfection of apartments in hotels or boarding houses vacated by such invalids; third, a special building should, as soon as possible, be provided as part of the hospital of the city and county of Denver, for the reception of advanced cases of indigent consumptive invalids; fourth, such indigent consumptives as do not require special medical attention, but who are unable to earn a living, should



be relegated to the county poor farm; fifth, the Visiting Nurses' Association, under direction of the Charity Organization, should make it a special duty to exercise espionage over all indigent consumptives at large in this community and to secure the data necessary to their proper consideration by the authorities.

*TUBERCULOSIS OF CATTLE;  
HOW IT MAY BE REPRESSED  
AND ITS RELATION TO THE  
PUBLIC HEALTH.\**

By MARK WHITE, V.M.D., (Univ. of Penn.), Denver, Colo.

The subject which we are to consider to-day is one with regard to which the greatest possible differences of opinion have prevailed. Is tuberculosis of cattle transmissible to man and, if so, to what extent is the milk of tuberculous cows harmful?

Is milk containing or liable to contain the tubercle, to be used as food? Is the existence and spread of bovine tuberculosis a menace to the public health? Is it not a fact that the rapid spread of bovine tuberculosis and its transmissibility to man one of the gravest and most important medical or sanitary questions of the day?

Is it not a fact that tuberculosis causes more sickness and death than all other diseases combined, among animals and man? Is it not true that diseased milk or milk containing the tubercle bacilli the greatest cause of infantile mortality in existence? Is it true that one hundred thousand children die each year in the United States from fatal infection through bad milk? I think it is.

In answer to these questions Koch has said: "I should estimate the extent of infection by milk and flesh of tuberculous

cattle, and by the butter made from their milk, as hardly greater than that of hereditary transmission, and I therefore do not deem it advisable to take any measures against it."

On the other hand, Von Bering has recently said: "The infant milk is the chief source of tuberculous infection."

Is it true that the milk of tuberculous cows is of so little importance to public health that no action on this point is necessary, or is this the chief source of infection in mankind, or is the truth, perhaps, to be found somewhere between these extreme views?

A dogmatic answer to these questions can be of no value. The situation is to be cleared up not by opinions, but by facts.

I have thought that it might interest you to consider some of the leading facts that are of importance in arriving at a decision as to the merits of this case. It does not seem so strange that such different views prevail in regard to tuberculosis when we consider how recent is the knowledge of this disease.

While some exceptional clear sighted individuals recognize tuberculosis to be an infectious disease and contagious, in olden times it was not generally considered as such, even by the most advanced medical thinkers, until after the epoch-making experiments of the French investigator, Villemin, in 1865. These experiments proved that tuberculosis might be transmitted by inoculation from animal to animal and from man to animal; they demonstrated the infectious nature of the disease and were accepted as proving the identity of human and animal tuberculosis. This work was repeated and confirmed by numerous investigators in different countries and especially by Chauveau 1868, Gerlach 1869, Bollinger, Klebs, Cohnheim and others.

The unity of the different forms of tuberculosis of mammals was regarded as

\*Read before the Colorado State Medical Society, October 11, 1906.

fully proven when, in 1882, Koch discovered the tubercle bacillus and established the fact that this germ is the cause of tuberculosis and that there can be no tuberculosis without the presence of the tubercle bacillus. This discovery placed the study of tuberculosis on an entirely new plane and there was general agreement to the effect that tuberculosis of man and higher animals is one disease until, in 1896, Theobald Smith discovered certain differences between a culture of tubercle bacilli from a cow, and another culture believed to be of human origin.

These differences consisted in minute variations in size and shape, and some slight, although well marked, differences in growth upon artificial culture media, and, most strikingly and most constantly, in differences in virulence for cattle. It was shown by Smith and also by Forthingham, Dinwiddie, Ravenel and De Schweinitz that, while cultures of tubercle bacilli from cattle afflicted with tuberculosis are, almost invariably, capable of producing progressive tuberculous disease when inoculated upon cattle, that on the other hand, cultures of tubercle bacilli from man are *usually* not virulent for cattle; that is to say, when inoculated upon cattle they produce either no effect or merely local disease.

This especial subject received a great deal of attention at the laboratory of the State Livestock Sanitary Board of Pennsylvania during a period of five years. A large number of experiments were instituted for the purpose of comparing tubercle bacilli from men and from cattle. It was found that tubercle bacilli from cattle are at least as virulent and generally very much more virulent, than tubercle bacilli from man for experimental animals including herbivora, carnivora, omnivora and also monkeys of several species.

This development in the study of tu-

bercle bacilli from different mammals, which had taken place almost entirely in America and which was just becoming generally known, was brought vividly to the attention of the whole world in 1900, by Kock who, in a paper before the British Congress on Tuberculosis, made the statement that I have already quoted to the effect that bovine tuberculosis is of such slight importance to the public health that no action need be taken regarding it. In our effort to come to a just decision in this matter, it is necessary to analyze briefly the facts upon which Koch's opinion was based.

Koch had found by experimentation that American investigators, following the lead of Theobald Smith, were correct in their conclusions to the effect that tubercle bacilli from cattle are *usually* much more virulent for experimental animals than are tubercle bacilli from man. He was so impressed by this fact that he came to regard tuberculosis of man and of cattle as distinctly different types of disease. It had been shown that human tuberculosis cannot, *in most cases*, be transmitted to cattle, and so he concluded that the converse must be true and that bovine tuberculosis cannot be transmitted to man.

It does not seem that this inference can fairly be drawn from the established facts, that the chief and most striking difference between human and bovine tubercu-bacilli lies in the fact that the bovine germ is very much more virulent than that from man, so that while most human tubercle bacilli are incapable of causing disease in experimental animals of several kinds, there is no experimental animal (mammal) that is able to resist infection by the bovine germs. So far, then, as this point is concerned, it would appear that the demonstration of the extreme virulence of the bovine tubercle bacillus would point quite as clearly to more dan-

ger to mankind than had formerly been attributed to this germ, than to lessened probability of danger.

Another point that we must consider, that was made by Koch in his London address, is with regard to infection of the human subject by way of the digestive tract. Koch called attention to the fact that when tuberculosis is carried from cattle to mankind, it is through the food and especially through the milk, for meat is usually cooked enough to destroy tubercle bacilli, if any should be present. This being the case, he concluded that when coming from cattle, the disease should originate in the victim as a primary intestinal tuberculosis.

Koch seems to have had the opinion that in cases of food infection, the only, or at any rate the chief, lesions should involve the intestines. He calls attention to the reports of the Charité Hospital in Berlin showing that, in a great mass of material, but ten cases of primary tuberculosis of the intestines occurred in five years, and also that among 933 cases of tuberculosis in children Baginsky never found tuberculosis of the intestines without simultaneous disease of the lungs and the bronchial glands.

With reference to this point, it may be said that the cases admitted as primary intestinal tuberculosis under Koch's very rigid interpretation of this term, do not furnish any evidence whatever as to the frequency with which infection occurs through the digestive tract. It has been shown that tubercle bacilli may pass through the wall of the intestines and enter the blood system by way of the thoracic duct without causing any visible alteration in the intestinal wall. Indeed, when animals are artificially infected with tuberculosis by feeding them tuberculous material, it is very rare to find ulceration of the intestine, or tuberculosis in the

walls of the intestine, unless an excessive quantity of infectious material has been fed.

It has happened in some carefully conducted experiments that animals infected by feeding have, after death, shown extensive tuberculosis of the lungs and very little disease, indeed sometimes no trace of disease, in the organs of the abdominal cavity.

A third point made by Koch in the address referred to is stated in these words: "Hitherto, nobody could decide with certainty in such a case whether tuberculosis of the intestine was of human or of animal origin." Now we can diagnose them. All that is necessary is to cultivate in pure culture the tubercle bacilli found in the tubercular material, and to ascertain whether they belong to bovine tuberculosis by inoculating cattle with them. In this view Koch is in accord with Smith, who holds that the type of the bovine tubercle bacilli is so fixed that it is not lost through growing in the human subject, so that after the death of such subject, the germ may still be recognized as of bovine origin, and the surest test for this is to determine whether it is capable of producing disease in a calf.

Since 1901, a very great amount of fruitful study by leading bacteriologists has been devoted to this particular problem. It is clearly established that tubercle bacilli as they occur in mammals may be divided into two varieties or types: the bovine type, which grows slowly in artificial cultures, which is relatively thick and short, and which is highly virulent for rabbits, cattle and all other mammals; and the human type, which grows more readily in artificial cultures, is slightly longer, more slender, is more inclined to be beaded and which is but slightly virulent for rabbits and cattle, and is of lower virulence than the tubercle bacillus of bo-



vine type for all other animals, excepting, possibly, for the extremely susceptible guinea pig.

Let us look for the cause of this difference. Every living object is influenced by its environment; its habit of growth and its characteristics are determined to a great extent by the conditions to which it is subjected. When a living organism inhabits the tissues of another living being, it is known as a parasite. The tubercle bacillus is a parasite, and has lived a parasitic existence so long that it is now incapable of growing under natural conditions outside of the living body. If it is propagated, during a long period, from one animal to another, of the same species, it must develop certain characteristics expressive of the influence of its long continued and unchanging environments.

Tubercle bacilli as they affect mammals are propagated chiefly in the bodies of human beings and of cattle. While the disease affects animals of other species and, indeed, no warm blooded animal is wholly exempt, tuberculosis is not propagated continuously in animals of any other species than the two just referred to. For example, tuberculosis is, in some regions very common among swine. But it is always impossible to show that the prevalence of tuberculosis among swine is in proportion to the amount of milk they eat and to the prevalence of tuberculosis among the cows that produce this milk. Tuberculosis of swine is most prevalent where they are fed on skimmed milk from creameries in districts where there is much tuberculosis among the dairy herds. This disease is but rarely transmitted from swine to swine.

Tuberculosis of horses occurs where there is much tuberculosis of cattle, and where it is the practice, as was formerly the case in Denmark, and to a less extent in England, to feed a certain amount of cows' milk to foals and to horses out of

condition. I know of no case where there has been reason to believe that tuberculosis has been transmitted from one horse to another. Tuberculosis of dogs and of cats is sometimes contracted from cattle through feeding upon infectious milk or upon the organs of animals afflicted with tuberculosis, as at a slaughter house; or pet dogs and cats kept in the house may contract tuberculosis from their consumptive masters. Tuberculosis of all other mammals may likewise be traced to a bovine or human source.

Thus it is, that there are two main branches or streams of mammalian tubercle bacilli, one following its course through the bodies of consumptive people and the other through the bodies of consumptive cattle, and each giving off here and there, side branches to animals of other species; but these secondary branches terminate within a generation or two after leaving one of the main stems, while the principal currents continue to flow through the bodies of men and of cattle, on and on, as they have done for centuries, leaving broad swaths of dead and dying victims. This continuation of tubercle bacilli in one line or the other has produced the definite characteristics that have been mentioned as the distinguishing features of the human and bovine type of this germ.

The important question from a public health standpoint is: Are the germs of bovine tuberculosis capable of producing disease in man? This question can now be approached in a new and enlightening way. Formerly the attempt was constantly made to decide the question as to the transmissibility from cattle to man, by what might be termed clinical observations. Numerous cases were recorded to show that people had become infected with tuberculosis from cattle through wounds upon the hands. Some of these cases appear to lack none of the accuracy

of the deliberately planned scientific experiment, the possible sources of error having been so carefully excluded. There are also numerous cases on record which are believed to show that tuberculosis has been conveyed through milk from cows to children. Some of these observations appear to have been made with such care and completeness as to exclude all probability of error. For example: A young couple shortly after marriage, moved into an entirely new house in which their first child was born. The parents were thoroughly healthy, rugged people, entirely free from the slightest suspicion of consumption, and so far as known, there was no taint of consumption in the family of either. The single servant was a healthy young person. The child, which was fed on the milk of one cow, died of tuberculosis when about eight months old. Attention was then directed to the cow, and it was found that she was rather extensively tuberculous.

(Those who oppose the view that tuberculosis may be transmitted from the bovine to the human subject call attention to the possibility of error in all of the great number of observations similar to the one I have just given. Their criticism is that such observations do not prove that a child was infected through the milk, unless all other possible courses of infection are rigidly excluded. They say that the child may have contracted tuberculosis from a human subject through some unseen and unsuspected channel; that the germs may have been brought into the house by the grocer's boy or by the baker, or upon the hem of a skirt of a visitor. Such possibilities must be admitted, but it cannot be admitted that they destroy the conclusions that is usually drawn from these observations.)

If we assume merely for the sake of argument, that 10 per cent of the tuberculosis of childhood is derived from cat-

tle, it should not be in the least surprising, in view of the extent to which consumption prevails, and in view of the long time usually required for its development, the months or years that may elapse from the time the infection is acquired until the first symptoms of illness appear, that the route of the passage of infection from the cow to the baby should be unrecognized and unobserved. That this observation should not be made is still less surprising in view of the fact that for centuries tuberculosis has been passing from one person to another, and is chiefly propagated in this way, but it is only in the most recent times, indeed within the period of recollection of most of the adults of this room, that this essential fact has been recognized. Even now, there are a few unconvinced persons who deny it.

The recent great additions to our knowledge of the bacteriology of tuberculosis, which have made it possible to distinguish the bovine from the human type of tubercle bacillus, have made it possible to obtain exact and convincing evidence as to whether the bovine bacillus is capable of causing disease in the human subject. Koch recognized this point, as Smith had before him, and suggested that experiments be made to determine just how often people are infected by the bovine bacillus, the possibility of which he did not deny, although he regarded such infection as excessively rare. Studies on this point have been made in nearly all civilized countries, and they show that the bovine bacillus is the cause of a varying amount of disease. Of six fatal cases of tuberculosis in children, studied bacteriologically by Ravenel in Philadelphia, three were found to be infected with a tubercle bacillus of the bovine type.

Similar studies had been made by a great many individuals, by an English Royal Commission, and by a committee of investigators appointed by the Imperial

Health Officer of Germany. These investigations have shown beyond question that tuberculosis of man may be caused by tubercle bacilli of the bovine type. The proportions of the cases in which this germ is found varies considerably; of the German cases about one-eighth, and of the English cases about one-third were caused by bacilli of bovine type. *It must be remembered, however, that the number of studies that have been made in this direction are not yet sufficient to justify one in drawing any conclusions as to the actual frequency of the infection of the human being with bovine tubercle bacilli.* The clearly established and important point is that the same kind of tubercle bacillus that produces disease in cattle may also produce in man. Upon this point there appears to be no room for difference of opinion.

*Now that we know that tubercle bacilli of bovine type are virulent for men, we know that milk carrying them is freighted with danger.* The condition is as though the poisonous nature of some common substance had just been proven, as for example, of arsenic. Since we know that arsenic is highly poisonous, we know that bread, cake, candy or butter, containing arsenic is dangerous. It is not that these substances are in themselves dangerous. There is danger from the arsenic they contain. Since arsenic is a poison and may cause death, therefore, if it be present in an ordinary wholesome food stuff, it is known that that food is dangerous. It is not necessary to prove separately and specifically and by experiments on people that cake containing arsenic is poisonous. As arsenic is a poison, therefore, without doubt, the cake that contains arsenic is dangerous, and any food whatever that carries arsenic, is dangerous in proportion to the amount of arsenic that it contains.

Similarly, with regard to tubercle ba-

cilli, we know that these germs cause tuberculosis, and so anything that carries them is dangerous. A berth in a sleeping car, for example, in which the germs of tuberculosis have been deposited by a dirty consumptive, is known from this fact, to be dangerous. It is not necessary to show that some one at some time contracted tuberculosis from occupying a certain sleeping car. The tubercle bacilli are there, therefore there is danger.

And so, with regard to milk containing tubercle bacilli. We know that tubercle bacilli of the kind that develop in cattle are virulent for man. Therefore, milk containing such bacilli is dangerous.

So much established, the next important question is as to the frequency of the occurrence of tubercle bacilli in milk. I shall not go into this question at length, for it will probably be sufficient to say that tubercle bacilli are most plentiful in milk, and milk is most dangerous when the cow suffers with tuberculosis of the udder. Even though the milk of a cow with tuberculosis of the udder be diluted with the milk of a number of large herds, the mixture still continues to be infectious.

But tubercle bacilli may also occur in the milk when the udder is healthy. The danger in such cases is in proportion to the extent of disease in the cow. One of the striking points regarding tuberculosis of cattle is that the disease may be very extensively developed without producing external signs. This peculiarity was very strikingly shown in the case of a fat steer that was extensively and successfully exhibited at a number of state fairs and was afterwards awarded a prize in a large class of fat bullocks at the great livestock show in Chicago. After this last competition this steer was entered in a block test and was slaughtered, when it was found by the meat inspector that he was afflicted with extensively developed and widely distributed tuberculosis. And so it is that



some cows that yield infectious milk, even though they show no external signs of tuberculosis.

Fortunately, however, the greater part of the cows that yield infectious milk can be detected upon clinical examination by a skilled veterinarian. This would include not only cows with perceptible disease of the udder, but also those with chronic discharges of any kind, and cows with tuberculosis of the throat or lungs, such as to cause coughing. Where there are in a stable cows with extensive tuberculosis of the lungs, tubercle bacilli are scattered widely and may be deposited on the hair of the cows. Moreover, as cows do not expectorate but swallow their sputum, excepting when it is coughed out, tubercle bacilli may be passed in great numbers with the dung. Therefore, as the milk is soiled by the dust and dirt from the flanks and udder of the cows, from the hands of the milker, and from the stable air, it may become contaminated by tubercle bacilli from these sources, even though the milk is free from bacilli as it comes from the udder.

But most of this danger can be avoided, as I have said, by sufficiently frequent and careful physical examinations of milch cows. Unfortunately, however, even this precaution is rarely taken by states or municipalities, and indeed, in some places very little, if anything, is done to protect the people from bovine tuberculosis. Among the exceptions is Massachusetts, which has the most complete system of herd inspection of any state, and the courses of the milk supply of Washington are rather carefully controlled. In Pennsylvania, it is required, under a new law, that cattle with tuberculosis of the udder or with advanced or generalized tuberculosis shall be reported to the State Livestock Board, whereupon they are destroyed.

The introduction of a general system of dairy inspection would perhaps have

made more rapid progress if it had not been for the introduction of the tuberculin test. The tuberculin test is an extremely accurate method for the diagnosis of tuberculosis in living cattle. By means of it even the very early cases of infection can be discovered, even before the disease has reached a stage that renders the afflicted animal dangerous to other cattle, or to the consumer of its products. This test has furnished the means of obtaining very much more accurate knowledge than was ever before possible, with regard to the distribution of tuberculosis among cattle. It has been found during the past fifteen years, since this method of examination has been available, that tuberculosis prevails much more widely than was formerly known. We reckon now every animal as tuberculosis that reacts to the tuberculin test. This means practically every animal that is infected in any degree. Formerly only such animals were classes as tuberculous as showed physical signs of tuberculosis, and so only the more advanced and rather extreme cases were counted, the others having escaped detection.

The tuberculin test has shown such an appalling amount of infection among the dairy cows of some regions that the extermination of such animals cannot be seriously considered. It would be highly unjust to the owners of such animals for the state to slaughter them without compensation, and for the state to pay for them would require an enormous and impossible appropriation. *More than this, it is unnecessary.* But the cost of exterminating animals afflicted with open or clinical tuberculosis, tuberculosis that may be detected by physical examination, falls within such limits as to make the plan feasible. In Massachusetts, for example, the indemnity for such cows amounts to about \$30,000 a year.

It is unfortunate that so many people are unwilling to support a proposed im-

provement because it is not ideally complete and perfect. Because such an inspection as I have outlined will not lead to the *complete eradication* of tuberculosis among cows, and will not insure the production and sale of milk *wholly free* from tubercle bacilli, some people are unwilling to accept the 90 per cent. gain that will come from the application of this system and consider this better to go along among existing conditions than to adopt any method that is short of ideal. I believe that such a policy is short-sighted and unwise. If too much is attempted, the expense and annoyance, and the difficulties of a new situation, may lead to the abolition of the entire effort, which in the meantime, has lost reputation to such an extent that it becomes more than ever difficult to effect any advancement whatever, in that particular field.

But, if an ideal condition cannot be obtained with relation to the general milk supply of a large city, it may be obtained on a small scale. In nearly every large city there is some special milk supply that is wholly above reproach. Being sold under the certificate of a commission, milk of this character is commonly known as "certified milk." To the credit of Baltimore it should be said that certified milk on sale in said city was recently awarded the highest prize at the National Dairy Show held in Chicago. Such milk is ideal.

*In searching for a reason for the tardy development of the application of the sanitary methods on dairy farms, we find that it is chiefly due to lack of knowledge and indifference of the consumer. In the large run, the consumer is sure to get what he demands and is willing to pay for. People who are willing to accept any milk that is delivered to them, with no knowledge as to its antecedents, may be sure that they will not get milk of high quality. Until consumers and physicians*

*know what clean milk is, and demand clean milk, and demand information as to the conditions under which milk is produced, the production of safe and clean milk will not be encouraged.*

It was found through investigation made three years ago by the Keystone Veterinary Association in Philadelphia, that nearly all the hospitals and public institutions in that city *were buying milk as they would buy coal, from the lowest bidder, and without any standards for inspection*, or requirements as to the cleanliness and the sanitary conditions of the milk, the farms or the cows. Such bad state of affairs exist in Denver. Further investigation showed that much of this milk came from such sources that it would not be safe or clean.

There must be some means of controlling the accuracy of reports of milk dealers as to the conditions governing their supplies. This means should be furnished by the Department of Health (having a veterinarian as a member) or by the Livestock Sanitary Board of the state.

Heretofore, nearly all of the work that has been done in this direction has been done to repress tuberculosis of cattle for the purpose of controlling it as a *disease of cattle*, just as contagious pleuro-pneumonia and Texas fever are controlled as diseases of cattle, and not on account of these diseases to public health. As a disease of cattle alone, tuberculosis is of sufficient importance to justify expenditures very much greater than have yet been made for its control in any state.

The method for controlling tuberculosis of cattle that has proven to be most effective is that based on the detection of tuberculous animals by the use of the tuberculin test, and their isolation. If all of the tuberculous cattle in the country could be detected, and then separated from contact with other cattle, tuberculosis of cattle could not progress from

that time, and it would become extinct with the last tuberculous animal in quarantine. But the difficulty of putting this system into operation generally is due to the great extent to which tuberculosis prevails, and the absolute impossibility for any existing organizations to make the necessary examinations, and exercise the control required to make the plan effective. Denmark has done more in this direction than any other country.

During the past five years considerable work has been done by the Livestock Sanitary Board of Pennsylvania for the purpose of developing a practical system for the immunization of cattle from tuberculosis. The principle of the system that has been employed is quite the same as that first employed and described by Pasteur for the vaccination of animals against certain infectious diseases by the use of attenuated but living virus of the disease to be prevented. This principle was made use of in America a number of years ago with relation to tuberculosis by Dixon (1829), Trudeau (1892) and De Schweinitz (1894.) The first experiments upon the immunization of cattle from tuberculosis by the use of injections of living tubercle bacilli, were made in England by McFadyean. Von Behring in Germany, has done considerable work in this field.

The Pennsylvania work has been conducted on rather a large scale, and for the purpose of testing, comparatively, different methods for the vaccination of cattle. These tests have included a great variety of methods, that is, of vaccinating materials and of modes of administration.

The vaccines used with best results consist of tubercle bacilli of human type. These are injected into the circulation. The animal resists infection by these organisms, and the development of this resistance makes it possible for the subject

to thereafter resist infection by the more virulent bovine tubercle bacilli. This process has been tested so fully that there is no longer any doubt that the principle on which it is based is sound.

There are some differences of opinion as to the way in which the vaccine should be prepared, as to whether it should be dried and its vitality reduced, after the method of Von Behring, or whether it should be used moist and fresh, after the Pennsylvania plan. There are also differences of opinion as to the proper dosage, and as to the intervals that should elapse between successive vaccinations.

*Pearson has worked out a method which he knows is effective, and which will positively protect cattle against very severe natural exposure for years.* It is highly probable that better methods will be developed, but it is satisfactory to have one available now that is proven. Pearson's method requires each animal to be vaccinated three times, at intervals of a few weeks. By this means there is conferred a high degree of immunity that lasts for such a long time that it is of great practical value. Whether immunity lasts for life can only be determined by more prolonged trials.

But even this very valuable system cannot be applied to all dairy cattle on account of the tremendous expense, it will come into use but gradually, being first applied where the need is greatest. It will not take the place of all other methods for controlling tuberculosis, but will be used in connection with them, and while it will aid in the eradication of bovine tuberculosis, it is, and for a long time will continue to be, advisable to follow the plan for the frequent physical inspection of dairy herds that I have outlined.

In the meantime, bovine tubercle bacilli need not be fed to infants, for certified milk is available, and other milk may be



rendered safe in respect to this factor by adequate pasteurization, which, unfortunately, gives to the milk a bad taste?

Dr. A. Calmette, the Director of the Pasteur Institute of Lille, in France, has just claimed a discovery which is causing a certain sensation.

Up to the present it is said that milk is not dangerous providing it is sterilized. Boiling it at 100 degrees for five or six minutes seems to be the best precaution against possible infection with tuberculosis.

Late experiments by Dr. Calmette and Mr. Breton upset this idea. In a communication made to the Academies of Sciences, Dr. C. declared that after years of study and repeated experiment, he had come to the conclusion that the ingestion of tuberculous products, even when sterilized by heat, was dangerous for subjects already affected by tuberculosis, and could be injurious for animals free from that disease. The experiments were conducted on guinea pigs. Six of these eat dried bacilli; six others received injections of the same bacilli into the peritoneum.

Two weeks later, they received in six meals, at intervals of five days, five milligrammes of bovine bacilli, at each meal, heated at 100 degrees during five minutes, and mixed with cut-up carrots. All the pigs of the first series lost flesh rapidly and died on an average in forty-one days. Those that had received infection died in thirty-one days.

Among the pigs used as witnesses, two died in thirty-seven days, the others lost considerable flesh.

Consequently, the repeated ingestion of small quantities of tuberculous bacilli, killed by heat, hastens death considerably, as would also the repeated injection of small doses of tuberculin.

With healthy animals those dead ba-

cilli give rise sometimes to serious disorders absolutely similar to those observed when non-tuberculous animals are made to eat small doses of tuberculin.

Final conclusion: Milk, even sterilized, must be prohibited from use for food with man, and especially for children, if it comes from tuberculous cows. Sterilization is powerless in removing all danger. Milk containing dead tubercle bacilli stimulates the development of tuberculosis in those that are affected with it.

Therefore, a cow must be free from the least taint of tuberculosis or disease, in order for her milk to be free from danger or wholesome;—we must not hope to get rid of the danger after it leaves the cow, by artificial means.

#### Discussion.

Dr. Taylor: Dr. Sharpley was to discuss Dr. White's paper, but he was called out, and asked me to read these remarks:

"In discussing the able paper of Dr. White, will say the subject is broad, and one can find good authority on either side of the question. The doctor, to my idea, strikes the key-note when he says: 'In searching for a reason for the tardy development of the application of sanitary farms we find that it is chiefly due to the lack of knowledge and indifference of the consumer.' In the large run the consumer is sure to get what he demands, and is willing to pay for. People who are willing to accept any milk that is delivered to them, without knowledge as to its antecedents, may be sure that they will not get milk of high quality, and until consumers and physicians know what clean milk is, and demand clean milk and information as to the conditions under which milk is produced, the production of safe and clean milk will not be encouraged.

From personal inspections of the various dairies supplying milk to the City of Denver, I find that careless employes are in the most cases responsible for dirty milk. Some dairymen pride themselves on the sanitary condition of their dairies, and take pleasure in showing clean stables, corrals, etc., and yet they overlook the fact that their men are washing their cans in dirty, as well as contaminated water; they pay little, or no attention to drainage or the nature of their water sup-

ply, and if the water is clear, no matter whether it comes from a well or a running stream, it is to their idea, pure.

"The Health Department of the various cities endeavor to enforce the laws and prohibit the sale of milk from any diseased cows. I think that pure milk is essential, and that unclean milk is responsible for many diseases, especially with children.

"In the prairie states, as many of you know, the presence of tuberculosis in cattle is not as prevalent as in the east, and the government inspectors at the various stock yards find but few cases in our native cattle."

Dr. Taylor: Any further discussion on Dr. White's paper.

Dr. White: I would like to say, Mr. Chairman, the last part of that paper was liable to cause a false impression; that is, that tuberculosis is not common in the Colorado cow. That would be true speaking of the cow on the range, but that is untrue speaking of the cow in Denver or in the dairies, because I have held autopsies on cows in Colorado, and have found tuberculosis, and if there should be some effort made by the authorities to ascertain the percentage of tuberculosis among the dairies, it would be alarming. New cows taken from the range would not run very high, but the spread of tuberculosis in a herd is very rapid. You can call in your herd this year and you may hardly find more than one cow that is tubercular, and next year seventy-five to eighty per cent. of the herd will be tubercular, so there is no doubt in my mind but we should investigate or take some steps to find out how much tuberculosis would be found in our old dairies. I think we would find fully fifty per cent. I tested a herd of twenty-two. Four out of twenty-two proved tubercular. That is a good enough per cent. for me.

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## RÖNTGEN DIAGNOSIS OF RENAL CALCULI.

By G. H. STOVER, M.D., Denver, Colo.

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One of the most interesting and at the same time most difficult fields in Röntgen diagnosis is that involved

in the examination of the kidney for calculus. For a long time there was much doubt as to the ability of the Röntgen ray to afford accurate and reliable evidence, but as time passed it has been found that the evidence of skiagraphy is to be depended upon; it has been found that all renal stones are sufficiently opaque to the Röntgen ray to be detected by it. So few stones are composed of but one substance that it would be practically unheard of to find one made up solely of a substance perfectly transparent to this light.

The classical signs of renal calculus, namely: the characteristic pain, pus in the urine, and blood in the urine, are not absolute evidence that a stone is present, as I shall be able to show very well. On the other hand, in most of the cases, which have come under my observation in which a stone was present, the classical symptoms were present.

The value of a positive diagnosis by the Röntgen ray is disputed by very few at this time, I think. The value of the negative diagnosis, in the face of strong clinical evidence, is not so well acknowledged, but as surgeons have more experience in the matter, and particularly when the work is done by a competent radiologist,\* a negative diagnosis will be given more weight.

I here present a table showing practically all of the work I have done in this branch of skiagraphy, and I think the facts shown are sufficient to speak very well for the usefulness of the Röntgen ray in the diagnosis of renal calculus.

No.	REFERRED BY DR.	Previously Passed Stone.	Characteristic Pain.	Pus in Urine.	Blood in Urine.	Skigraphic Diagnosis.	Operated.	REMARKS.
2000	E. J. A. Rogers.....	No	Yes	No	No	Neg.	No	Symptoms disappeared.
2490	L. T. Durbin.....	Sand	Yes	No	No	Neg.	No	Symptoms disappeared.
2597	G. R. Feil.....	Yes	No	No	Yes	Pos.	No	To be operated soon.
1552	T. J. Carlin.....		Yes	No	No	Neg.	No	
1298	W. H. Heisen.....	No	Yes	No	Yes	Neg.	No	Still has vague pain at times.
1414	W. B. Craig.....			i		Neg.	No	Lost sight of.
1825	W. F. Church.....	No	Yes	Yes	Yes	In ureter	No	Tubercle bacilli have appeared in urine.
2011	J. N. Hall.....	No	Yes	Yes	Yes	Neg.	No	Occasional pain still.
1851	E. P. Hershey.....	No	Yes	Yes	Yes	Neg.	No	Symptoms disappeared.
1537	F. E. Maxham.....	No	Yes	Yes	No	Neg.	No	Lost sight of.
2061	W. B. Craig.....	Yes	Yes	Yes	Yes	Neg.	No	Lost sight of.
2200	S. T. Brown.....					Neg.	No	Lost sight of.
2254	S. D. Van Meter.....	No	Yes	Yes	Yes	Neg.	No	Tubercle bacilli in urine.
1476	G. R. Feil.....	No	Yes	Yes	Yes	Neg.	No	Stone was in bladder.
1338	E. P. Hershey.....	Yes	Yes	No	Yes	Neg.	No	Symptoms disappeared.
1485	G. N. Macomber.....	No	Yes	Yes	Yes	Neg.	No	Symptoms disappeared.
1406	L. Freeman.....	No	Yes	Yes	Yes	Neg.	No	Symptoms disappeared.
1522	.....	No	Yes	Yes	Yes	Neg.	No	Symptoms disappeared.
1673	E. F. Dean.....	No	Yes	No	No	Neg.	No	Symptoms relieved.
2218	J. R. Hopkins.....	No	Yes	No	Yes	Neg.	No	Symptoms disappeared.
2297	M. R. Root.....	No	***	No	No	Neg.	No	Condition unchanged.
2476	J. Elsner.....	No	Yes	Yes	Yes	Neg.	No	Symptoms disappeared.
1432	McNaught.....	No	Yes	Yes	Yes	Neg.	No	
2129	E. E. Hill.....	No	Yes	No	Yes	Neg.	Yes	Cancer of kidney found.
1208	W. W. Grant.....	No	Yes	Yes	Yes	Neg.	Yes	Ademonia of kidney found.
1256	M. Kleiner.....	No	Yes	Yes	Yes	Neg.	Yes	Hemorrhagic kidney.
1503	L. Freeman.....	No	Yes	No	Yes	Neg.	Yes	Movable kidney found.
1283	L. Freeman.....	No	Yes	No	Yes	Neg.	Yes	Interstitial nephritis found.
1300	L. Freeman.....	Yes	Yes	Yes	Yes	Neg.	Yes	Movable kidney found.
1443	L. Freeman.....	No	Yes	No	No	Neg.	Yes	Movable kidney found.
1479	L. Freeman.....	No	Yes	No	Yes	Neg.	Yes	Interstitial nephritis found.
1346	L. Freeman.....	No	Yes	Yes	Yes	Neg.	Yes	Tubercular kidney found.
1295	S. D. Van Meter.....	No	Yes	No	No	Neg.	Yes	Floating kidney found.
2588	L. Freeman.....	Yes	Yes	Yes	Yes	Neg.	Yes	Hydronephritis, necrosis, found.
1701	C. B. Van Zant.....		Yes	Yes	Yes	Neg.	Yes	Tubercular kidney found.
1209	W. E. Edmunson.....					Neg.	Yes	No stone found.
2235	S. T. Brown.....	No	Yes	Yes	Yes	Pos.	Yes	Many stones found.
2526	J. W. Harris.....	Yes	Yes	Yes	Yes	Pos.	Yes	Stone found.
1467	L. Freeman.....	No	Yes	Yes	Yes	Pos.	Yes	Stone found.
1907	P. V. Carlin.....	No	Yes	Yes	Yes	Pos.	Yes	Stone found.
1434	S. D. Van Meter.....	No	Yes	No	Yes	Pos.	No	Passed stone.
2644	J. Boice.....	No	Yes	Yes	Yes	Pos.	Yes	Palpated in operation, but not found. See text.
2657	L. Freeman.....	Yes	Yes	Yes	Yes	Pos.	No	Passed cystin stone later.
2674	Seebass & Craig.....	No	Yes	Yes	Yes	Pos.	Yes	Large stone removed.

\*\*\*Vague.

No case in which the Rontgen diagnosis was negative, and in which no operation was done, has either passed a stone or had further symptoms which would lead one to believe that an error had been made.

In thirteen instances in which the diagnosis was negative, and an operation was done upon the kidney, no stone was found when this organ was opened and searched.

The symptoms from which the patients suffered were due to a variety of diseases—from cancer to movable kidney—of the four examples of movable kidney, all had characteristic pain; two had blood in the urine; one had pus in the urine; one had both pus and blood in the urine.

Of the eight cases in which a positive diagnosis was made, six were operated and the diagnosis confirmed; in the other



two the stones were passed by the patients thus avoiding an operation. One of these was a very small stone of pure cystin. A few days before the examination, the patient had passed a large cystin stone. In one of the cases in which a positive diagnosis was made, and in which the shadow of the stone was quite distinct, but the outlines not strong, I stated that it was probably a soft stone; while handling the kidney the operator was able to feel the stone distinctly; later, when the kidney was opened, the stone could not be found, and the operator stated that he had undoubtedly crushed it. The first urine from the patient was saved, and in it was found the debris of the stone.

It is now pretty generally recognized that no operation should be done upon the kidney until a skiagraphic examination has been made. This, of course, does not include the emergency cases, in which immediate operation is needed on account of a stab wound, gunshot wound or rupture of the kidney from traumatism. In some instances there are more than one stone present, and it would be well for the operator to know this, otherwise he might discontinue his work after removing the first stone found in the operation, or there could be instances in which operative measures were to be undertaken for other causes than stone, and the stone might be overlooked if a skiagram had not shown its presence.

I have at hand no statistics to quote, but I am of the opinion that it would be well if many of the cases at present diagnosed as chronic appendicitis and ovaritis were given the benefit of a Röntgen examination of the kidney.

Finally, the value of a kidney skiagram depends wholly upon the skill and experience of the radiologist. No one but an expert can make these examinations properly, and there are very few men in the United States to-day who can do it.

After the skiagram has been made, its

interpretation must be made by one who is competent. There are many sources of error; there may be shadows due to fecal matter, or to buttons, or to phleboliths, or to defects in the plate used, and the radiologist must be able to recognize all these. I remember a patient who presented herself to Dr. W. B. Craig for operation for the removal of a renal calculus; she had with her the skiagram made by her physician, and a note from him stating that the patient had a large stone with many sharp spicules upon it; the doctor declined to operate until I had seen the skiagram; I found a beautiful black spot on the negative, with a dozen sharp points radiating from it. This was due to the fact that there had been a small hole in the light proof envelopes in which the plate had been placed to make the exposure; the daylight passed through the hole, acting on the film at that point. The shadow of a calculus would have been white. The only white shadow on the negative in that region was the image of the end of a transverse process of one of the vertebræ. The patient was not operated upon.

#### Discussion.

Dr. Hall: I think we ought to emphasize the point that a great deal depends on the reading of the plate. This I have had pointed out to me for some years. I thought of making my own plates at one time during the early days, but after seeing how much I had to learn I gave it up. The reading of the plate is as important as learning to hear through a stethoscope, and I wish to say that I know of a number of cases that can bear testimony to the importance of this thing, diagnoses correctly made in these cases.

Dr. Grant: At the request of Dr. Stover, and in accordance with my own inclination, for many years as internist and pathologist—I have had something of a training myself as a diagnostician—I want to make the statement which I think the scholarly and distinguished chairman of this section will endorse, that perhaps owing to our instruments of scientific precision, there never was a time in our history when we had so few distin-

guished diagnosticians as today, and the reason for this is, that surgeons and physicians rely too exclusively upon the microscope and other instruments, supposed to take the place of the discriminating surgeon himself. In view of this situation and this condition of things, there are today, I repeat, fewer skilled men, diagnosticians in surgery and medicine than perhaps were ever before known in proportion to the number of practitioners. I do not believe that the diagnostician should ever sacrifice his judgment for these instruments. I believe when he does so he places himself at a disadvantage, and that his judgment and gumption as a diagnostician will retrogress, just to the extent that he depends on these instruments.

Now the case which Dr. Stover related of my own; this man was examined by some three or four radiographers, Dr. Stover, Dr. Childs and some one else. I relied upon my own knowledge and experience of your machine, and the fact that to Dr. Childs' mind, especially, it indicated a stone—yet he was not confident that it was. He made two examinations, one the day before the operation. I stated that there were two distinct conditions which did not usually exist in the case of a kidney stone that was giving rise to the perforation and ulcer. One was that the hemorrhage for two and a half years had been absolutely constant; there was practically no intermission, and the last year or two a considerable pus with it; only once there was an intermission following an attack of what would seem like colic. That would look like a stone, but the persistent hemorrhage is not characteristic to the clinician of a stone. Another symptom was the tenderness which always exists over the loin on pressure whenever the stone had produced an ulcer. These two symptoms were not characteristic of a stone, and I stated distinctly so to these gentlemen. Yet I determined to operate on this case regardless. The man's condition called for an operation. When operated, the wall was found studded with small adenomata as large as a walnut in the pelvis of the kidney. There is one difficulty in radiography. The man was a blacksmith, with thick abdominal walls, very thick loins, weight 180. I mention this simply to show that even with these instruments we are frequently in the dark. I simply want to encourage a more accurate observation of clinical symptoms, which will relieve us of a great deal of embarrassment.

Dr. Stover: I fully appreciate the remarks

of Dr. Grant, and while in hearty accord with them, I think there is undoubtedly too much weight given to laboratory diagnoses in many cases. In this particular instance my diagnosis was negative. My record shows that I made a negative diagnosis. In several of these cases I have had my diagnosis questioned very much by the surgeon, and in one of them, Dr. Freeman's case, when I told him that there was no stone there, and that the woman might have passed the stone—she had had paroxysmal attacks, attacks of pain very characteristic, and occasional passages of blood, and with the presence of pus urine—I made a negative diagnosis. He said: "Stover, you come up tomorrow, because I am going to take that stone out." He got this big hemorrhagic, nephritic kidney. In another case, I think of Dr. Hall's, there was very little evidence. A properly made negative is one in which the quality of the ray that has been used to make the picture is of the right quality, the right time of exposure for the thickness of the tissues, and the density of the tissues. A negative may show a transverse process, the last rib, or the shadow of the outline of the psoas-iliacus muscles, but where there is a shadow of a stone, there ought to be a stone. Now you have got to look out for some other shadows there. Some times a button turned on edge, something in the food will cast a shadow, maybe some fecal matter, something in the ureter, some dense substance, a phlebolith in the sacrum, and so on. Sometimes there will be the most beautiful little round shadows looking perfectly as if there was a stone there. You have got to make a proper transcript of the skiagraph, but even with a proper negative it is hard to make. You have got to try a good many times. Even if you have got the right kind of a skiagraph you have got to know how to read the skigram to know what to look for. Sometimes a little round spot will show the reflected light, show the defects in the film; it is safe to make two pictures always. If you can eliminate these serious errors, with a perfect negative, and it shows a shadow, there is the stone. Nobody dares to stand up on the floor of a medical society and say absolutely anything, say that if there is no shadow there is no stone. A good deal depends on an outline of a shadow. I have found cases of a big shadow, they said it was probably a tumor. That man had a great big carcinomatous cancer of the kidney. In another case there was a shadow, and I would not have blamed anybody for calling it a stone—any

radiographer would have said it was—and the operation proved it was not. The patient had been operated on once before, and a patch of scar showed. Not every shadow is a stone. You have got to get acquainted with shadows; you have got to know your shadows. If you have a negative diagnosis, and a perfectly made picture in the neighborhood where the stone ought to be, you are quite safe in saying there is no stone present. Maybe there is some kind of a stone that we have not run across yet that won't cast a shadow, but as far as I know, there is no stone that does not cast a shadow, and if it does not cast a shadow, there will be no stone found. I regard a properly made negative of excellent weight in diagnosis. That does not interfere with the case. You sometimes have to make statements a little stronger than they really are.

## Progress of Medicine

### INTERNAL MEDICINE.

EDITED BY

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### MASSIVE DOSES OF SALICYLATES IN RHEUMATISM.

Clarke (*Am. Journ. Med. Sciences*, Sept., 1906) discusses this subject, arriving at the following conclusions:

First, sodium salicylate can and should be given in much larger doses than are generally used; second, given in massive doses it reduces the fever, relieves the pain and swelling and shortens the course of the disease; third, it is not injurious to the heart and appears, by quickly cutting off the disease, to offer some protection to that organ; fourth, the patient's tolerance to the drug and rapid cessation of symptoms form valuable therapeutic tests for the diagnosis of acute articular rheumatism.

He gives from 10 to 20 grains, well diluted, every hour till the full physiological effect is reached—which requires from 70 to 360 grains—then the same dose about every four hours. O. M. G.

### FUNCTIONAL ALBUMINURIA IN ATHLETES.

W. Collier (*British Med. Journ.*, Jan. 5, 1907) has made observations upon this point for 20 years—principally upon students of Oxford. At first he advised all who showed albumin after exercise to refrain from severe athletics, but he found by following the cases that of those who disregarded his advice, no greater proportion became constant albuminurics than of those who followed it. He then made systematic examinations of a number of boat crews and running men from different universities and found albumin in from 60 per cent. to 100 per cent. of the men—the proportion generally being in direct ratio to the work done. He believes it to be as physiological as the hypertrophy of the heart which occurs under the same circumstances, and thinks it inconsistent for athletic boards and insurance companies to exclude them. The tests applied, however, were only the cold nitric acid and the heat and acetic acid, and these we now know, do not differentiate serum albumin from nucleo-albumin, which is a not uncommon constituent of normal urine.

O. M. G.

### PARAVERTEBRAL TRIANGLE OF DULNESS IN PLEURAL EFFUSION.

(Grocco's sign.)

W. S. Thayer and Marshall Fabian (*Am. Journ. Med. Science*, Jan., 1907) have made a study of 35 cases of pleural effusion, occurring in the Johns Hopkins Hospital during the past year, and arrive at the following conclusion:

In 32 cases the sign was definitely demonstrated in 30, of the remaining two, in one the fluid was interlobar, while in the other the amount was small and a hasty examination failed to reveal the sign. The triangular dull area occurs on the oppo-



site side to the effusion and has the following boundaries:

Vertically the spines of the vertebra, the upper end of which is just above the level of flatness caused by the effusion, the base is represented by the lower limit of pulmonary resonance, extending from 2 to 7 c. m. from the spine and the hypothermuse by a line connecting these two points, sometimes with a slight convexity outward. The dull area is confirmed by the other physical signs. The triangle is larger in right-sided effusions and (very important) is lessened or destroyed by lying on the affected side. It is caused by the interposition of the fluid between the spine and the lung of the unaffected side as well as displacement of the mediastinal structures. O. M. G.

#### CHRONIC JAUNDICE.

Klans and Kalberlah (*Berl. Klin. Wochenschr.*, No. 49, 1906). Chronic jaundice, congenital or acquired, is rare—the literature is limited to 27 cases, and Klans and Kalberlah add two others occurring in brothers aged 22 and 26. The father had suffered frequent attacks of jaundice and it is thought that a relative of the mother had chronic icterus. The older brother had pleuritis at eight, followed by jaundice, swelling of the liver and anemia. The youngest brother was in good health until three years ago, when while serving in the army he had a slight attack of indigestion, followed by jaundice, which continues to the present time.

In the urine of older brother at one time bile pigment was present, but it disappeared; the feces of both were colored.

The principal symptoms of the cases reported are, permanent icterus, urine free from bilirubin, occasionally urobilin present, normally colored stools, swelling of the liver and spleen, diminished hemaglobin, dark-colored blood serum containing bilirubin but no urobilin.

Swelling of the spleen in 21 patients,

swelling of the liver in 14. Usually the urine contained urobilin, 14 were certainly congenital, five probably so, acquired 10.

Minkowski believes that the disease is due to abnormal changes in blood pigment, Kranhals, an increased destruction of red blood cells due to action of toxins on the liver. A. Pick attributed his case to congenital communication between the lymphatics and the bile ducts or congenital insufficiency of the liver cells.

Vidal and Ravant speak of a congenital degeneration of the liver with over-production of bile; other French workers, of a chronic infection of the bile passages, and Senator suggests a primary disease of the spleen with secondary changes in blood and bile pigments. The authors speak of hereditary predisposition and over-production of bile and consequent increased destruction of red blood cells, and would locate the prime cause in the liver (infection toxæmia in acquired cases) with secondary involvement of the spleen. In congenital icterus, seemingly the primary change is in the spleen, there is little, if any, change (at first) in the liver, and few, if any, subjective symptoms, while in the acquired disease the liver is most prominently in the foreground, and there is marked general disturbance.

In view of these differences it may be wise to classify the congenital and acquired cases separately. W. J. B.

#### SURGERY.

EDITED BY

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#### PRESENT OPERATIVE NECESSITIES FOR THE CURE OF TUBERCULOUS ORCHITIS.

Dr. Charles E. Barnett states that radical procedures only are of value in all forms of surgical tuberculosis, and this statement is more especially applicable in

Tuberculous Orchitis. To be sure of a cure, all tissue that is infected with tuberculosis must be removed, the complete operation necessitating not only the thorough removal of the testes with all doubtful tissue, but also of the vasa deferentia down to the bladder.

The question of primary or secondary invasion is still a moot one, primary invasion statistics being so variable and diverse that the operator should consider testicular tuberculosis primary unless other foci be found to disprove such a supposition.

The modes of infection are so many, including, as they do,—(a) hematogenous, (b) infection by way of the lymph channels, and (c) infection by excretion of tuberculous material through the kidneys, that the surgeon should be on his guard constantly. This is especially true as regards infection from cohabitation with a tuberculous individual, or from catheterization or other instrumentation.

All outgoing streams must therefore be removed, in order to prevent a post operative invasion of tuberculosis into adjacent tissue.

The desexation "bug-bear" should be entirely removed from the patient's mind, and, instead, encouragement should be given him for a continuation of his copulative power.

Injections of paraffine in the production of artificial testes are of value from a cosmetic standpoint, and also because of the great satisfaction they afford the patient. Operation, when indicated, should be immediate, followed by prophylactic and hygienic treatment until the maximum improvement is gained.

The writer's operative technique is described in full. (*International Journal of Surgery*, Jan., 1907.)

[As against surgical procedures, whether conservative or radical, in tuberculosis of the genito-urinary tract,

may be mentioned the late work of Ross, of London, Toronto, and others, yielding most brilliant results by treatment with injections of Tuberculin with due regard to the opsonic index.—Ed.]

#### GYNECOLOGY AND ABDOMINAL SURGERY.

EDITED BY

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Denver and Gross College of Medicine.

#### RADICAL ABDOMINAL OPERATION IN CARCINOMA OF CERVIX UTERI.

Prof. E. Wertheim, of Vienna Austria, upon invitation, read a very interesting paper before a joint meeting of the Chicago Medical and Gynecological Society, Oct. 10th, on this subject. He stated "if to the vaginal uterine extirpation the name 'German Operation' is applied, the radical abdominal operation can with equal justice be characterized as the 'German-American operation.'"

The operative technique is as follows: After a careful preliminary treatment of the cancer per vaginam by scraping and burning it with Paquelin's cautery, and after a thorough disinfection, the patient is placed in Trendelenburg's position, and the abdominal cavity opened by a median longitudinal incision between the symphysis pubis and umbilicus.

By dividing the posterior layer of the broad ligament, the ureters which appear through the peritoneum are exposed up to their entrance into the parametrium. It is necessary to avoid isolating them all around, and their surrounding vascular network must be spared as much as possible.

After dividing the peritoneum, the bladder must be separated from the uterus. Then follows the ligation and division of the infundibulo-pelvic, the broad and round ligaments. The order in which these first three steps follow one another may be varied.

The next step is the ligation and division of the uterine vessels with the sur-

rounding cellular tissue. For this purpose the following manipulation serves: The index finger of one hand is pushed along the ureter through the parametrium toward the bladder until the tip of the finger appears there; the vessels are then raised on the finger, which covers the ureter, so that the ligation and division of the vessels can take place without injury to the ureter. The bleeding from the uterine ends of the vessels is stopped by clamps or ligatures.

The uterine vessels are divided, the vesical portion of the ureters become easily accessible and the preparation of the ureters can be readily completed. In simpler cases the vesical end of the ureter separates without any difficulty, partly by using the blunt end of the finger, partly with a few strokes of the scissors, up to its ending in the bladder, and the bladder itself is separated in its deeper part from the tumor and the vagina. If the ureter is fixed, the advantage of the abdominal route is most apparent, as by careful preparation one can separate even firmly fixed uterers from the tumor without any danger to them.

Next follows the separation of the rectum from the vagina. The isolation of the carcinomatous organ has now been sufficiently effected, and its removal follows: The parametrium is divided as closely as possible to the pelvic wall, and the vagina is cut across. Loss of blood is avoided by applying four or five bent clamps, on each side, before dividing, which can be replaced later by ligatures. The vagina is then cleaned out again by dry-wiping with sterile gauze. To avoid infection from the cancer, strong clamps are applied to the vagina before its division, so as to isolate the cancer from the vagina, which is divided below these clamps. Bleeding from the paravaginal tissue is stopped by stitching round the vaginal stump. The division of the va-

gina after the preceding application of such clamps is preferable to the procedure at first adopted—namely, extracting the uterus through the vagina, having first loosened it all around—on account of the more effectual control of bleeding by the former method.

To extirpate the neighboring lymphatic glands the peritoneal incision is prolonged upward. The great iliac vessels are, as a rule, already bare, if not a blunt division of the cellular tissue with the finger suffices. Every lymphatic gland at all enlarged in the region of these vessels, up to where the aorta divides and downward as far as the obturator foramen, must be extirpated. Bleeding must be carefully checked.

The wound must be treated as follows: The remaining cavity is filled loosely with iodoform-gauze, extending to the vulva. An exact closing of the peritoneal cavity over the gauze drainage is effected by the sewing up of the anterior and the posterior flaps of the peritoneum. The final step is suture of the abdominal incision in layers.

In answer to the question, "In what stage of the disease are the lymphatic glands affected by cancer?" he stated that it appeared from our investigations (*vide Kundrat*) that in 10 per cent. of cases, notwithstanding the absence of cancer in the parametrium, the glands were cancerous; and, vice versa; in 27.5 per cent., though cancer existed in the parametrium, the glands were free from it. In 40 per cent. of the cases the parametrium and lymphatic glands were free from cancer, and in 20 per cent. both were affected. These investigations and their results were also corroborated by later authors.

Furthermore, it is an error to think that the removal of the regional lymphatic glands adds a considerable difficulty to the operation. Only in places where the lymphatic glands are intimately adherent



to the large vessels, especially the veins, is their separation difficult, or perhaps impossible. Indeed, one must not adhere to the view that the removal of the regional lymphatic glands is of value only when it can be thoroughly executed, for this is a technical impossibility, as well as unnecessary, and he persists, in spite of many opinions to the contrary, in retaining his view, that carcinoma is never contained in lymphatic glands unchanged in size, shape, or consistence.

On reviewing the primary and permanent results he feels justified in asserting that the radical abdominal operation has attained a permanent position in the therapy of carcinoma colli uteri. This demonstrates itself, moreover, in the rapid spread of the operation, at least in Germany and Austria.—(*Surg., Gyn. and Obst.*, Jan. 1907.)

#### NERVOUS AND MENTAL DISEASES.

EDITED BY

**Bernard Oettinger, M. D.,**

Neurologist to the Hospital for the City and County of Denver, and St. Anthony's Hospital, Denver, Colorado.

#### CEREBRAL ARTERIO-SCLEROSIS.

Joseph Collins (*Journ. of Nervous and Mental Disease*, Dec., 1906) describes a clinical picture which he claims is pathognomonic for primary cerebral arterio-sclerosis. The symptoms are fairly constant. Subjectively, they are few and elicited at times with difficulty. Headache may be complained of, variable in severity, often referred to the occipital region. Slight giddiness occurs often, coupled with a sensation of station and gait insecurity, not, however, attributed to the vertigo. There is feeling of impaired vitality. Attacks of meaningless laughter, less often paroxysms of crying without apparent cause or emotional concomitant. A striking feature is change of the patient's appearance, the face without the relaxation of repose becomes immobile and inanimate. The most remarkable change

refers to gait. The stride is short, oftentimes only a few inches, the feet widely separated, are not lifted far from the ground. Movement rhythm may be fast or slow. When the patient turns he often thrusts out his hands as if to seek support though he rarely falls. He may run better than walk. Mental symptoms may or may not exist. In the majority of cases they are not conspicuous and consist merely in some depression, indifference and apathy. With the disease far advanced mental symptoms are more common. The clinical picture reminds one of Parkinson's disease but closer observation shows no vasomotor symptoms, no marked alteration in pitch of voice, no characteristic tremor, no festination. The knee jerks are usually lively, in some cases the Babinski phenomena is present. These are not essential clinical features, nor is disturbance of the sphincters, although this may occur. In a majority of cases there is but slight involvement of skeletal and visceral arteries. The blood pressure may be below 110-130 (S) and the heart sounds devoid of change. Occasionally there is complete absence of skeletal arterio-sclerosis, these cases suggesting cerebral arterial involvement by the clinical picture alone. In private practice patients thus afflicted are often looked upon as hysterical or neurasthenic persons, while in hospitals they swell the considerable number of cases not diagnosed.

The author has notes on 15 cases with five autopsies out of a total of 135 cases of cerebral arterio-sclerosis. He wonders that this type of sclerosis has not received more attention, although one constantly sees them mentioned to illustrate other points in neuropathology. Instances in American and foreign literature are cited. Two of the author's cases are clinically detailed and a summary of an autopsy protocol appended.

## REGENERATION OF NERVES.

According to Mott, Halliburton & Edmunds (Editorial, *N. Y. Med. Journ.*, Dec. 15, 1906) new fibres of cut nerves are of central origin. In a series of experiments union of central and peripheral ends of a divided nerve was prevented by covering the divided ends with caps made of sterilized drainage tube. After 100 to 150 days no evidence of regeneration could be demonstrated in the peripheral end of the divided nerve. The following events take place in a divided nerve, according to the authors. The neurilemma cells multiply, elongate and unite into long chains. This process is more vigorous at the termination of the central end than at that of the peripheral end. This process is thought to be phagocytic and nutritive. At the central end of the cut nerve the process is effective and provides for the nourishment of the actively lengthening axis cylinder. At the distal end, on the other hand, it is ineffective so far as any real new fibre formation is concerned, unless the axones reach that end of the cut nerve. In the latter event the products of the activity of the neurilemma cells provide the supporting and nutritive elements necessary for the continued growth of the axones.

## OPHTHALMOLOGY.

EDITED BY

E. W. Stevens, M. D.,  
Denver, Colorado.

## ANTE-PARTUM OPHTHALMIA.

Stevenson and Ford (*Ophthalmoscope*, April and Oct., 1906) have collected from the literature 37 cases in which babies were born with symptoms of ophthalmia, and in their communication adduce notes of 18 additional cases, bringing the total number of recorded cases up to 55.

By ante-partum ophthalmia is meant an inflammatory affection of the conjunctiva produced while the foetus is still in the uterus, by the infection of a micro-

organism, the incubation period of which has elapsed completely or partially before the baby is born. In the former case signs of inflammation are actually present at birth, while in the latter they appear within a post-natal period shorter than any accepted incubation period of the micro-organism.

All cases of ophthalmia of the newborn are the outcome of microbic infection. The gonococcus is the commonest micro-organism in such cases, and the easiest to identify bacteriologically, but others are now and then present as pneumococci and bacillus coli communis. The same considerations as to causation, however, apply equally to all of them.

In patients whose eyes have been inoculated with gonorrhœal pus for the cure of panus, it has been noted that an invariable interval of two and a half to three days elapse before the slightest sign of inflammation of the eyes becomes evident. The great majority of cases of ophthalmia neonatorum develop on the third day after birth, a fact pointing to a period of incubation identical with that of older subjects. The text-book statements that this period, in infants, varies from a few hours to two or three days is probably due to the inclusion of instances of ante-partum infection, and indicates, not a varying period of incubation, but the much more widely-spread occurrence of "congenital ophthalmia" than has been generally accepted. In taking 24 hours as a minimum incubation period, a very large allowance is made for any possible unusually rapid action of the gonococcus in newly-born children. The simplest explanation of ante-partum ophthalmia is that the causative microbe, be it gonococcus or otherwise, has gained entrance to the conjunctival sac through membranes that have been ruptured some considerable time before birth of the baby. This period should not be less than 24 hours. About one-

half of the reported cases are satisfactorily accounted for in this way. In rather more than one-half of the recorded cases infection must have taken place through the unruptured membranes, a possible explanation being that some slight injury short of actual rupture permitted access of the gonococcus.

The labors in most cases were natural and not unusually tedious, the average duration of 17 cases where this detail is given was 13.6 hours, the longest being 48 hours and the shortest one hour. Of 17 mothers 12 were multipara.

Many of the cases were at birth in an early stage of ophthalmia. In two cases the ophthalmia had apparently run its course in utero leaving a damaged or shrunk eye-ball with traces of discharge or signs of inflammation still present. Possibly certain cases of the so-called congenital anomalies of the eyes, as corneal opacities and staphyloma belong to this category and are best explained on the theory of an intra-uterine infection.

#### EAR, NOSE AND THROAT.

EDITED BY

Wm. C. Bane, M. D.,

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C. E. Cooper, M. D.,

Denver, Colorado.

#### GASTROSCOPY.

Though not truly within the province of the laryngologist, yet because of his familiarity with the anatomy of the region of the upper esophagus and his training in the observation of mucous membrane lesions under artificial illumination, satisfactory gastroscopy has thus far been elaborated by him.

With a gastroscope of his own design, Chevalier Jackson has diagnosed gastritis, malignancy, peptic ulcer, which latter he has cured with local applications, as well as removed a foreign body. He does not hold forth gastroscopic examinations in lieu of exploratory incision, but

believes that it will become a great aid to the surgeon when justly appreciated, because of the facility with which surgical conditions of the stomach can be diagnosed and will be accepted by the patient more readily than an exploratory incision.

In addition, confirmatory evidence of some diseased conditions may be secured by taking specimens of new growths for pathological examination.

In the gastroscope he uses, the source of light is an incandescent lamp placed at the distal extremity of the tube where most light is needed and under such illumination the gastric mucosa may be as readily seen and studied as that of the larynx in the laryngoscope. The diameter of the adult tube is nine mm., the length is eighty cm. An obturator accompanies the tube and facilitates its introduction. Other accessories are a secretion aspirator, cotton carriers, forceps, probe, mouth gag, etc. Dry batteries furnish the electrical current and are preferred to ordinary lighting circuits, because the latter may be "grounded" through the patient and cause damage.

Cocain anesthesia may be used in selected cases, but ether is preferred, as it controls the retching.

Asepsis and gentleness in the manipulations are emphasized. The instrument is guided into place by the hand within the mouth, which lifts the cricoid cartilage upward (supine patient) and thus opens the upper esophagus. The head hangs over the end of the table.

Obstructions to the passage of the tube may be met at the esophageal entrance from pressure of the cricoid, at the bifurcation of the trachea and at the *hiatus diaphragmaticus*. The tube is guided more easily by sight than by sensation after it enters the esophagus.

The examination is carried on thus: After reaching the stomach the tube is pushed down to the greater curvature and



an inspection is made of the anterior and posterior wall; it is then withdrawn into the esophagus and inclined laterally and pushed downward again. This procedure is repeated. Finally the portions of the stomach not immediately visible are by external manipulation brought into the field and examined. The presence of gastric fluid and the inaccessibility of some portions of the stomach form the chief difficulties other than the introduction, of which, mention has been made.

The dangers are few; the systemic effect of cocain, esophageal ulceration, aneurism and cardiac lesions being the most important. Caution is necessary in ulcer and suspected ulcers.

Negative results are of limited value because of certain inaccessible regions which may be diseased and not seen. The explorable area in classically shaped stomachs is the middle third. However, in vertically situated ones the pylorus may be viewed. Manual external manipulations bring into view the pylorus and fundus. Gastrotopic stomachs are readily examined. The inexplorable area is the upper portion near the esophageal orifice.

Case reports, colored drawings and skiagraphs illustrate the article. Chevalier Jackson (*Annals of Otology, Rhinology and Laryngology*, Dec., 1906.)

C. E. C.

#### TRACHEO-BRONCHOSCOPY.

Gustav Killian strongly recommends direct tracheoscopy, with the patient in the sitting position under cocain anesthesia for the diagnosis and treatment of infiltrations, ulcerations, cicatricial formations, new growths, etc., as well as the examination of the trachea.

More important than these, however, are the alterations in form and position of the tracheal tube, which are so definite and localized that they allow accurate diagnostic conclusions. Tumors of the

anterior mediastinum and enlargements of the thymus compress the lower half of the trachea in front; aneurisms of the arch compress it from the left in its lower third; cancer of the esophagus, high up, presses from behind; enlargements of the peritracheal lymph glands from the sides; and the most frequent and complex of all disturbances, are produced by thyroid hypertrophies.

The record of 87 cases of foreign bodies removed by means of the bronchoscope is pointed to with some pride. The natural route, in contrast to that through a tracheotomy wound is preferred, though more difficult of performance. The latter is, however, best available in debilitated patients, when urgent dyspnea or changes in the lungs are present as also where the objects inspired are sharp or soft and macerated. These form about one-fourth of the cases.

A new spatula widened in front and divided in halves along its length has been added to the armamentarium and cocaineization of the trachea is carried on through it.

"The focal affections of the lung form an object of surgical interference and this depends upon the power to recognize such foci early, to ascertain their nature and to localize them accurately. To this end bronchoscopy can be of assistance, and if the diseased parts stand in relation to the bronchial tree, and especially to its lumen."

"But there is another and much simpler way to obtain bronchoscopically more accurate details about open pulmonary foci. Chance observations has taught me that fine mops moistened with cocain solution may be passed extremely far down through the smaller bronchi without undue pressure or any harm whatever to the patient. Measurement showed that we had certainly reached the neighborhood of the surface of the lung. Appar-

ently the separate branches take a straight course to the periphery. In order to prove to you that we can actually penetrate so far with a straight probe, I have had prepared a series of X-ray photographs and I would like to emphasize the fact that they were taken in the living subject."

Its advantages are that open pulmonary foci are accessible to surgical interference if necessary, local applications can be made, and foreign bodies situated near the periphery located and felt.

The bronchoscope together with Sauerbruch's methods open a new field—surgery of the lung. (*Laryngoscope*, Dec., 1906.) C. E. C.

## Constituent Societies

The Medical Society of the City and County of Denver held a regular meeting January 22, 1907, in the Academy of Medicine, the meeting being called to order by President Bane at 8:20 p. m.

Dr. L. V. Howard, on favorable report of the Board of Censors, was elected to membership.

Under the Scientific Program, Dr. G. H. Stover gave a stereopticon lecture on the **Therapeutic Use of the X-Ray**, which was both interesting and instructive. He stated that the rays were not a cure-all, nor were they to be considered the only remedial agent of value, even in selected cases; that there was, however, a certain field of usefulness, and that, in many instances, the rays were markedly curative, and were often to be preferred to operative procedures, requiring no anesthetic for administration, and leaving a far less objectionable scar. Most brilliant results had been obtained in rodent ulcers; in epithelioma of the skin, the results had been successful in some cases, while in others, notably those which were badly advanced, they were of no value; in acne and mycosis fungoides, the treatment was satisfactory; in Hodgkin's disease results were fair; in tubercular adenitis, of the neck and elsewhere in the body, it was one of the best forms of treatment, especially as in many of these cases the patient is greatly debilitated and an operation is consequently inadvisable. The results of treatment were dependent upon the quality of ray used, whether hard or soft, of high penetration and little chemical action

or of low penetration with high chemical action. The stereopticon pictures illustrating the various pathologic conditions with results of ray treatment were clear and distinct, and were made from actual cases under the doctor's observation and treatment, and had the additional merit of not being "doctored." Dr. Stover's paper was discussed by Drs. Nickerson and Gibson.

Dr. W. H. Sharpley read a paper on **The Present Epidemic Diseases**, dwelling particularly upon the scarlet fever epidemic. From his position, as Health Commissioner, Dr. Sharpley was able to speak authoritatively on the present epidemic; he said that a great number of cases had been discovered among school children while attending school, thereby showing the great value of systematic medical inspection. He believed the present epidemic had its origin in West Colfax, where, owing to the ignorance of the people, effectual quarantine was difficult and often impossible. He traced the spread of scarlet fever to the many mild cases which were often unrecognized and to the ignorance, filth, and unsanitary conditions prevalent among the foreign population of the city, notably, the Russian Jews, Italians and Austrians. The discussion of Dr. Sharpley's paper was quite general and spirited: Drs. Oettinger, Stover, E. J. Rothwell, M. J. Krohn, Friedman, Gibson, R. L. Taylor, Collins, Maddox and Denison taking part. In closing the discussion, Dr. Sharpley answered a number of questions and successfully upheld the actions of the Board of Health, refuting many grievances which had been aired in the general discussion and which he showed to be, for the most part, more fancied than real. As a result of Dr. Sharpley's paper and the ensuing discussion, the "enteinte cordiale" between the Health Office and the profession was greatly enhanced.

After some discussion, a motion was carried, "that it is the sense of the Denver County Medical Society that Denver should have a larger representation at the state meetings."

The resignation of Dr. H. T. Pershing from the Board of Censors was read and accepted, the chair appointing Dr. E. E. Dean in Dr. Pershing's place.

Drs. Carmody, Burns and Powell were appointed members of a reception committee to introduce new members of the society. The motion to appoint a Public Press Committee was tabled. On motion the society adjourned. Members present, 51.

ALBERT SILVERSTEIN, Secretary.

The **Boulder County Medical Society** held its regular monthly meeting in the Physicians' block Thursday evening, December 6, at 8 p. m.

The minutes of the last meeting were read and approved.

Those present were: Drs. Campbell, Lucy M. Wood, Jolley, Queal, Rodes, Giffin, Cattermole, Johnstone, Sarah L. Hughes and Spencer.

The name of Dr. George J. Kruk, of Eldora, was favorably recommended for membership by Drs. W. A. Jolley and F. H. Farrington, of the Board of Censors. He was elected to membership by the unanimous vote of the society. The name of Dr. Horace R. Burns, of Louisville, was proposed for membership by Drs. L. M. Giffin and E. B. Queal.

Dr. Jacob Campbell read a paper upon "**The Giving of Anesthetics.**" By way of introduction, he stated that the giving of an anesthetic was of such vast importance in the present day surgery that it had developed, as it should, into a specialty. He stated somewhat in detail his experience in the giving of his own anesthetics in mountain practice. This he had done without a single fatality, which emphasized the fact that anesthetics are probably not so dangerous as we have thought.

Statistics are of little value, as they differ with the experience of different men. It is stated that from the observation of the present knowledge of anesthetics we are led to the conclusion that it is not a question so much of what anesthetics, but whether it shall be general or local. The anesthetist's greatest asset is self-control. He should not be annoyed by the remarks of the surgeon, nor by the complications of anesthesia. He should know better than anyone else concerned with the operation what to do and when to do it.

Every student should be given an opportunity to give an anesthetic, and every school should have a chair on anesthetics. The anesthetists should not be held too strongly accountable for post-operative pneumonia and other sequels of anesthesia.

Dr. Campbell reviewed the advantages and disadvantages of both ether and chloroform, as well as the advantages and disadvantages of the different methods of administering them.

One method of administering anesthetics, which is well deserving of mention, is by the means of a funnel and rubber tubes so arranged that the tubes carry the vapors into the nostrils and the inhaler is not in the way of the surgeon during operations about the face, mouth and throat.

Discussion: Dr. Queal described an inhaler

surrounded by a gauze to prevent the waste of vapor. This inhaler requires less of the anesthetic.

Dr. Giffin stated that the apparatus has little or nothing to do with the success of the anesthesia. The success depends upon the anesthetist. His patients are more comfortable with water than without. A mouth-wash is used the day before the operation to avoid aspiration pneumonia, as germs may come from the mouth.

Dr. Cattermole says that it is better to let the anesthetist decide how to give the anesthetic. It is best for the surgeon not to interfere.

Dr. Jolley called attention to the recent work in physiological chemistry of the action of the organic radicles, such as  $\text{CH}_3$ ,  $\text{C}_2\text{H}_5$ , etc., and the inorganic elements, Cl, O, etc., upon the nerve cell composition.

Dr. Rodes spoke of warming the anesthetic, as better results are obtained with warm than with cold preparations.

In closing the discussion, Dr. Campbell emphasized the point that the anesthetist's greatest asset is coolness. He may be nervous from the strain, but he should be cool and deliberate. The surgeon can wait a few minutes, if necessary, for complete anesthesia.

Dr. L. M. Giffin announced that the University had subscribed for the **Index Medicus**, and that the Boulder County Medical Society was welcome to its use; the society, therefore, need not purchase the volumes.

The society adjourned to meet the first Thursday in January.

F. R. SPENCER, Secretary.

By E. F.

The **Boulder County Medical Society** held its regular annual meeting in the Physicians' block Thursday evening, January 3, at 8 p. m.

Those present were: Drs. Campbell, Jolley, Giffin, Gilbert, Cattermole, Lucy M. Wood and Spencer.

The minutes of the last meeting were read and approved.

Dr. Horace R. Burns, of Louisville, was elected to membership by the unanimous vote of the society.

Dr. Terrell, of Gold Hill, was proposed for membership by Drs. L. M. Giffin and F. R. Spencer.

The secretary read a letter from Dr. H. O. Dodge, tendering his resignation, because of ill health. He was immediately elected to hon-



orary life membership by the vote of every member present.

The secretary and treasurer made their reports for 1906, which were approved and accepted.

A letter from Dr. J. N. McCormack, of Bowling Green, Ky., with the resolutions of the Kentucky State Medical Society, was read. It was voted to lay the letter on the table, to be re-read with the Colorado State Medical Society's resolutions, when a larger attendance was present. A letter from the state secretary, relative to representation at the next state society meeting, was re-read. It was voted to send two representatives to the next state meeting, to read papers as follows: One paper to be read before the regular session, and one before one of the sections.

The following officers were elected for 1907:

President, Dr. Charles F. Andrews, of Longmont; Vice President, Dr. F. R. Spencer; Secretary, Dr. Lucy M. Wood; Treasurer, Dr. W. A. Jolley; Board of Censors, W. A. Jolley, F. H. Farrington and W. J. Baird. Dr. George H. Cattermole was elected delegate for 1907-8.

It was moved by Dr. L. M. Giffin, and seconded by Dr. F. R. Spencer, the motion being made in writing, that the chapter of the by-laws of the Boulder County Medical Society concerning dues be so amended as to read: "The annual dues for each member of this society shall be five (\$5.00) dollars."

The meeting adjourned to meet the first Thursday in February.

F. R. SPENCER, Secretary.

By E. F.

The Clear Creek County Medical Association met at Idaho Springs, at the office of Dr. A. Aberg, on the afternoon of January 8, 1907. The following members were in attendance: Dr. George Atcheson, president, Idaho Springs; Dr. Charles A. Ferris, vice president, Georgetown; Dr. A. Aberg, secretary-treasurer, Idaho Springs; Dr. J. A. Moorehouse, of Idaho Springs; Dr. John Atcheson, Jr., of Idaho Springs; Dr. E. P. Sherman, of Idaho Springs; Dr. E. V. Graham, of Silver Plume.

This being the first meeting of the association, it was entirely taken up by discussions regarding rules and regulations governing the business side of the practice of medicine in the district.

The following resolutions, that speak for themselves, were introduced, and in due form adopted:

## RESOLUTION.

Whereas, The Clear Creek Medical Association in official meeting the 8th of January, 1907, after due deliberation regarding the question of contract work, have condemned as unfair and unprofessional, the attendance on private families, private individuals and fraternal society-members' families, by monthly or annual contract; therefore, be it

Resolved, That members of this association shall promptly inform any private family, private individual, or fraternal society with which he or she is under such contract, of the ruling of this association, together with a notice of annulment of such contract, to take immediate effect, or latest on the 1st of February, 1907; and be it further

Resolved, That any physician in the district, whether a member of this association or not, who continues such practice, shall be considered guilty of unprofessional and dishonorable conduct; and be it further

Resolved, That members of this association shall not consult with another member or non-member who has been found guilty of such practice; and be it further

Resolved, That this ruling excludes the following time-honored contract work, such as railroad contract, mine contract, hospital contract or contract with any industrial or fraternal organization employing or having as members a number of individuals; and be it further

Resolved, That only individuals actually employed in such individual enterprise, or actual members of fraternal organizations (not their families), shall be taken care of under such contract; and be it further

Resolved, That one dollar per month for each such individual shall be the minimum charge; and be it further

Resolved, That such contract excludes treatment of confinement and venereal diseases.

## RESOLUTION.

Whereas, The charge of \$5.00 for old line life insurance, and \$2.00 for fraternal life insurance examinations, seem to be a fair and reasonable charge, considering the time spent on such examinations and the skill and care necessary; therefore, be it

Resolved, That on and after February 1, 1907, no member of the Clear Creek Medical Association shall make any old line life insurance examinations for less than \$5.00, or any fraternal life insurance examinations for less than \$2.00; and be it further

Resolved, That violation of this rule shall

cause the member to be suspended from membership in the association; and be it further

Resolved, That consultation with such suspended member shall be unlawful for any member of this association; and be it further

Resolved, That all life insurance companies and fraternal insurance organizations represented in the district, that pay less than the above stipulated price, be promptly notified of this decision.

Idaho Springs, Colo., January 8, 1907.

A uniform fee list was adopted and resolution passed that each and every member of the association send out monthly statement of accounts.

The question of circulating among members a list of so-called "dead beats" was discussed, and motion made and carried that such a list be prepared in the near future.

The Clear Creek Medical Association, like so many other county societies, is greatly hampered by having their members living far apart. The district includes the four cities of Georgetown, Idaho Springs, Central City, Black Hawk, besides outlying villages and camps, and as a consequence it is impossible to get all the members to attend meeting at once. As, however, every physician in the district, save one, has joined, and every one of the members are taking enthusiastic personal interest in the work and progress of the association, it promises to be a success in every respect.

A. ABERG, Secretary-Treasurer.

(Accompanying the report is a printed "Fee Bill" adopted by the association and effective after February 1, 1907. It is signed by the president and secretary. The schedule lists the fees to be charged for attentions from an office visit to major surgical work, with, in most instances, a sliding scale. There are about 90 items mentioned.—Ed.)

The regular meeting of the **Weld County Medical Society** was held in Dr. Hughes' office, Monday evening, January 7. The meeting was called to order by Dr. Ringle, the newly elected president. After the transaction of regular business, the secretary was instructed to notify Dr. M. Black that our society desired representation on the scientific program of the next state meeting, the appointment to be made later. Dr. Call was instrumental in having laid on the table an amendment to our by-laws permitting local dentists and pharmacists to affiliate as associate members, attend meetings and participate in local affairs. Dr. Church was appointed chairman of a committee to invest

in medical periodicals for the use of the entire society. Dr. G. Law, the Honorable President, now took the chair, and Dr. C. A. Ringle delivered his inaugural oration. His address was on the subject of **medical organization**, and covered the various fields in which the physician and members of the county society labors. The advice was well received, and members of Weld County Society will have some difficulty in wavering from the "straight and narrow path." Dr. G. H. Candlin, of Eaton, presented an interesting paper on "**A Few Eclectic Remedies**," which were well received and fully discussed by several members. Meeting adjourned at 10 p. m. CHARLES B. DYDE,

Secretary.

At the regular meeting of the **Pueblo County Medical Society**, held January 8, which was the annual meeting, the following officers were elected for the fiscal year of 1907: President, Henry B. Oertel, M. D.; First Vice President, J. J. Pattee, M. D.; Second Vice President, W. F. Singer, M. D.; Secretary-Treasurer, Crum Epler, M. D.; Censors: R. W. Corwin, M. D., W. L. Dorland, M. D., R. C. Robe, M. D.; Delegates to State Society, Hubert Work, M. D., J. M. Keeney, M. D.; Librarian, W. T. H. Baker, M. D.

January 15, 1907, by special invitation of Dr. Hubert Work, the Pueblo County Medical Society held the regular meeting at Woodcroft. The subject of the evening was a clinic by Dr. Hubert Work, exhibiting the three most common forms of insanity, namely: **Melancholia, Mania and Dementia**. After the clinic, a very elegant spread was served by Mrs. Hubert Work. CRUM EPLER, Secretary.

The regular monthly meeting of the **El Paso County Medical Society** was held at the Antlers Hotel, Wednesday, January 9, with the newly elected President, Dr. E. R. Neeper, in the chair. After the transaction of the usual routine business and the election to membership of Dr. Abbey Albertine, Yale, the secretary read a communication from J. N. McCormack, of Bowling Green, Ky., chairman of the Committee on Organization of the American Medical Association, relative to the importance of concerted action by the profession in the demand for just fees for insurance examinations. The letter included one from President Mayo, of Rochester, Minn. The subject is to be thoroughly discussed and voted on at the February meeting.

The society then listened to a masterly discussion of the "**Opsonic Index and Bacterial**



**Vaccines,"** by Dr. Gerald B. Webb, of Colorado Springs. Dr. Webb returned recently from London, where he has been studying in the laboratory of Dr. Wright. He first presented three clinical cases, which he has been treating by Wright's method of subcutaneous inoculation of bacterial vaccines. One was an Acne Rosacea, which proved upon ager culture to be due to one of the staphylococci. After a few weeks treatment, but a trace of the disease remains. Another was a tuberculous sinus, following operation, which, like the first case, had persistently resisted all treatment. This case is now responding to the treatment of inoculation with the vaccine for tuberculosis. The third was a man who had suffered with boils for about six months, which failed to respond to any treatment. After two inoculations with the vaccine of staphylococci his boils, eleven in number, had entirely disappeared.

In his discussion, Dr. Webb brought out the fact that the reason this man suffered continuously from boils was that his blood had a low opsonic index to staphylococci. His index is determined by mixing a pure emulsion of staphylococci with washed leukocytes and some of the patient's serum and then observing under the microscope the number or organisms which are found within each leukocyte, which organisms are of course being destroyed by the leukocyte. The leukocytes are obtained by centrifuging, and retain their bactericidal power for about twelve hours after removal from the body.

The bacterial vaccines are prepared by heating a culture to 60 degrees C. for one hour, when its power of reproduction is destroyed. This mixture contains a known number of organisms to a given quantity of the solution, and the patient can thus be inoculated with any amount that may be desired. The result of this inoculation is to increase the amount of opsonin in the patient's blood, which was below normal to staphylococci. The victim of disease then having been inoculated with a vaccine prepared from the organism which has caused his malady, and having developed a resistance to it, is able to throw it off. His leukocytes will destroy more microbes, that is, his opsonic index is high.

Dr. Webb displayed charts showing the improvement of pulse and temperature after the use of bacterial vaccines; he also exhibited microscopic spreads showing the methods of determining the index.

There were about thirty-seven present, members and visitors, and all went away feeling that they had had an insight into the future

method of combating infection, and rejoicing that, with this new discovery, we have materially strengthened our fortifications against disease.

OMER R. GILLET, Secretary.

January 3, 1907.

The regular meeting of the **Lake County Medical Association** was held at the office of Dr. R. J. McDonald. Those present were: Drs. Jeanotte, Whitmore, A. J. McDonald, R. J. McDonald, Sol G. Kahn, Theodore Hotopp and Calkins. The minutes of the previous meeting were read and approved.

Dr. S. B. McFarland, of Fairplay, was elected to membership.

There being no prepared paper, and no cases to report, the society proceeded to the election of officers for the coming year, which resulted as follows: President, J. A. Jeanotte; Vice President, A. J. McDonald; Secretary-Treasurer, H. A. Calkins; Delegate to the State Society, Sol G. Kahn; Alternate, H. A. Calkins.

Dr. E. T. Boyd was re-elected to represent the State Board of Medical Examiners. Dr. F. N. Cochems, of Salida, was selected to represent this association by the reading of a paper at the regular meeting of the state society. The meeting then adjourned to meet at the office of Dr. Hotopp January 17, 1907.

H. A. CALKINS, Secretary.

The **Las Animas County Medical Society** met in regular session at the office of Dr. Thompson, Friday evening, January 4, 1907. President McClure presided; the following members and visitors were present: Drs. Dayton, Dowling, Jaffa, Hutchinson, McClure, J. G. and J. R. Espey, Thompson, Davenport, Robinson, Freudenthal, and Drs. Ben Beshoar and Hinman visiting.

Interesting clinical reports by Drs. Thompson, Dawling, Dayton and J. R. Espey. The paper of the evening, **Chronic Nephritis**, was read by Dr. Dayton. Representative to read paper at next meeting of state session was then taken up, and Dr. Thompson was chosen. Drs. Hinman and Toney were elected to membership. A circular letter from Dr. McCormack was read.

The following officers were elected for the ensuing year: President, Dr. James G. Espey; Vice President, Dr. Perry Jaffa; Secretary, Dr. Alfred Freudenthal; Treasurer, Dr. T. J. Dowling; Delegate, Dr. D. G. Thompson.

After a short address by the retiring president, Dr. McClure, the meeting was adjourned to meet February 1, at the office of Dr. James Espey.

BEN BESHOAR, Secretary.



February 2, 1907.

A regular meeting of the **Las Animas County Medical Society** was held at the office of Dr. James G. Espey, and with Dr. Espey presiding.

The following members and visitors were present: Drs. M. and B. Beshoar, Davenport, Dayton, James G. Espey, Dunkle, Jaffa, Fox and Freudenthal.

Interesting clinical cases were reported by Drs. Beshoar, Dunkle and James Espey.

The paper of the evening, **Foreign Bodies in the Eye**, was presented by Dr. Davenport in an able and interesting manner, and was thoroughly discussed by all present.

Dr. Ben Beshoar introduced a resolution which, by motion, was laid on the table until a later date.

The application of Dr. Fox to become a member of the society was referred to the committee.

Being no further business, the society adjourned.

ALFRED FREUDENTHAL,  
Secretary.

February 2, 1907.

A special meeting of the **Las Animas County Medical Society** was called by President Dr. James G. Espey, at the office of Dr. John Grass, on Wednesday evening, January 23, 1907, to discuss House Bill No. 29, known as the **Pure Food and Drug Law**.

The following resolutions, introduced by Dr. John Grass, were adopted:

Resolved, By Las Animas County Medical Society, assembled in special meeting, that the bill now pending before the State Senate known as House Bill No. 29, or the New Food and Drug law, should be so amended that nothing in the act should apply to prescriptions written by regularly licensed Physicians, Dentists and Veterinary Surgeons.

Resolved, That otherwise we approve of the Pure Food and Drug law.

Resolved, That our secretary be instructed to furnish our State Senators with a copy of these resolutions.

There being no further business, the society adjourned.

ALFRED FREUDENTHAL,  
Secretary.

January 8, 1907.

The **Otero County Medical Society** met at La Junta, January 8, 1907, and was called to order at 8 p. m. in County Court room.

Those present were: Drs. Finney, A. L. Stubbs, Edwards, Jessie Stubbs and Moore.

Minutes of last meeting read, corrected and approved.

A resolution concerning **Life Insurance Examination Fees** was adopted, and ordered spread on minutes for signature of members of society.

At a meeting of the **Otero County Medical Society**, held at La Junta, Colo., the following resolutions were unanimously adopted:

I.

That the following preamble and resolutions are adopted by this society in session at La Junta, Colo.:

Whereas, Many of the life insurance companies have notified the medical examiners of reduction of examination fee from \$5.00 to \$3.00; and

Whereas, We, as physicians, realizing the responsibility incident to proper examination of the individual, believe such reduction to be unjust; therefore, be it

Resolved, That the **Otero County Medical Society**, and the medical profession in sympathy with them, in session assembled, do hereby declare such reduction to be unjust, and respectfully request that no physician legally authorized to practice medicine in Colorado accept such reduction of fee; and further, that any physician accepting such reduction be guilty of a breach of professional courtesy.

Resolved, That it is the sense of this society, that hereafter in each examination for life insurance in which urine analysis is required the minimum fee shall be \$5.00.

Resolved, That the several component societies forming the **State Association** be requested to adopt these resolutions.

II.

That the above rates shall not apply to industrial medical inspection, without urinary analysis, for amounts less than \$1.000.

III.

That no member of this society enter into any contract or agreement with any corporation, society, association, company or individual, to examine applicants for insurance for any stated salary or lump sum, thereby evading the spirit and instinct of the foregoing resolutions.

IV.

That the payment of all fees shall be authorized by the home office of the society or corporation to which such application is made, and under no circumstances shall an examiner receive or accept any part of this fee from an

agent or any other person or corporation, unless the full fee be paid by authority of the home office.

## V.

That each member of this society pledge himself or herself, in case a fellow-member be removed from the position of examiner for any corporation or society solely because of this action of the medical profession, that he or she will not accept an appointment from such corporation or society as examiner, nor make any examination for same in Colorado.

## VI.

That each member of this society bind himself or herself, by a pledge to be presented by him or her to the secretary, to abide by these resolutions.

## VII.

That the secretary be instructed to forward a copy of these resolutions to each county medical society in Colorado for adoption.

## VIII.

That a copy of these resolutions be forwarded to Colorado Medicine.

(Signed.)

Dr. A. L. Stubbs read a paper on the **Prevention of Sepsis in Obstetrics**, which was discussed by all.

The society adjourned to meet at call of president, or at regular meeting time.

W. M. MOORE,  
Secretary-Treasurer.

## Other Societies

### Colorado Ophthalmological Society.

The December meeting occurred in Colorado Springs, December 22, 1906, at the office of Dr. E. M. Marbourg. Thirteen members and one guest were present, representing Denver, Colorado Springs and Greeley.

Dr. E. R. Neepor presented cases as follows: (1) **albuminuria with hemorrhage into the vitreous**, in a woman of thirty-one, who had given birth to two healthy children, but suffered from impaired vision during each pregnancy; the point of the advisability of preventing further pregnancy being raised, and decided in the affirmative; (2) **amblyopia from macular degeneration**, in a girl of ten years, born at seven and a half months; (3) **recurring corneal ulcer** in an otherwise healthy housewife of fifty-six years; (4) **bulbar follicular conjunctivitis** in a woman of forty-seven, associated with hyperplasia of the tissues of the nose, with an alligator-like skin covering

that distorted organ; and (5) **penetrating ocular injury** from glass gauge explosion.

Dr. J. A. Patterson showed the following cases: (1) **anastomotic vessels on the optic disk, with cerebral lesion** in a man of fifty-seven, who had suffered from embolism of the central artery of the retina four years before; (2) **loss of fusion sense at infinity** in a woman of twenty-three, with headaches and asthenopia; (3) **alternating convergent squint** which had existed from birth, in a boy of seven years, in which two operations had been necessary for the correction of the squint, together with glasses to correct the hyperopia and astigmatism, and the use of stereoscope to train the fusion sense; (4) **double central atrophic choroiditis** in a woman aged fifty-six; and (5) an enucleated eye showing **congenital cataract, atrophic irides, and glaucomatous changes**, with gross and microscopic sections.

These cases were discussed by Drs. Coover, Black, Friedmann, Patterson, Walker, Libby, Marbourg and Neepor.

Adjourned.

GEORGE F. LIBBY,  
Secretary.

## Correspondence

### Success With Vaccines in Pulmonary Tuberculosis.

Colorado Springs, Colo., February 7, 1907.

Dear Mr. Editor:

It will probably interest your subscribers who read my paper in your last issue to have a preliminary report of some results in the mixed infections of phthisis obtained since my return.

Four patients in whose sputa the pneumococcus was the accessory organism, and whose opsonic indices to this germ varied from .7 to 1., have all markedly decreased their sputa and coughs, following inoculations with vaccines prepared from their own pneumococci.

In one patient whose organism accessory to the tubercle bacillus proved to be the staphylococcus pyogenes aureus, the first inoculation of vaccine prepared from this reduced to daily output of sputum from 3 ounces to  $\frac{1}{2}$  an ounce. Although possessing a good sized cavity, all expectoration has ceased on lying down at night, and during the night, for the first time in eight years, and friends at her boarding house ask what she has done with her cough.

In a patient referred to me by Dr. A. C. Magruder, in whom no tubercle bacilli had been

found, but who was considered to have a bronchiectatic condition, due to streptococci; the inoculation of one dose of vaccine, prepared from these, absolutely stopped a morning evacuation of more than one ounce of sputum, which had been a daily occurrence for two years, and the patient now does not expectorate until five hours after rising, and then but slightly. Very truly yours,

GERALD BERTRAM WEBB.

## New Members

C. I. Burt, Silver Plume; Edward R. Fouts, Russell Gulch; A. A. B. Yale, Colorado Springs; A. A. Corbin, W. O. Patterson, Pueblo; A. W. Clarke, Del Norte; S. B. McFarland, Fairplay; R. L. Cram, Swink; W. F. Hassenplug, Thos. O. McIntyre, W. E. Driscoll, W. W. King, B. F. Cunningham, James B. Gaston, J. A. Dunwoody, F. A. Hassenplug, J. O. Roberts, J. H. Hereford, Raymond St. Clair, R. E. Morris, of Cripple Creek; A. C. McClanahan, M. A. Robison, Charles E. Elliott, C. M. Spicer, A. J. Campbell, H. G. Thomas, George McKenzie, of Victor; Katherine Polly, of Elkton; B. F. Jones, G. E. Vander Schouw, A. I. Hayes, of Goldfield.

## Books Reviewed

**A Practical Treatise on Materia Medica and Therapeutics**, with Especial Reference to the Clinical Application of Drugs. By John V. Shoemaker, M. D., LL. D., Professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Professor of Diseases of the Skin in the Medico-Chirurgical College of Philadelphia; Physician to the Medico-Chirurgical Hospital; Member of the American Medical Association and the British Medical Association; Fellow of the Medical Society of London, etc., etc. Sixth Edition. Thoroughly Revised. Royal Octavo, pp. 1244. Cloth. Price, \$5, net. Philadelphia: F. A. Davis Company, Publishers, 1906.

In this, the sixth edition, the author has spared no pains in bringing the work up to the present requirements of the student and practitioner by a careful revision of the text to conform with the last pharmacopea, and about 100 pages have been added. Part I, comprising 84 pages, is an entirely new edition, devoted to general considerations, the pharmacopea, materia medica, prescription writing, classification of remedies, poisons and antidotes, etc. We are, however, surprised to note the ab-

sence of mention under poisons the toxic effects of wood alcohol, of which there has been much written recently.

Part II devotes 841 pages to the consideration of remedial agents or drugs, arranged alphabetically, and includes all of the drugs and preparations made official by the United States and British Pharmacopeas, together with the newer remedies which have recently come into use by the profession.

In Part III the non-pharmaceutical remedies and expedients receive attention in 231 pages. Electricity, pneumotherapy, mechano-therapy, hydro-therapy, climatology, psycho-therapy and light therapy (Roentgen ray, radium, etc.) are among the subjects considered here.

A very complete general index is followed by a clinical index. The printing is quite clear, and important points are well brought out by the judicious use of bold faced letters.

In a word, the present volume should materially aid the student, and prove a valuable ready reference for the busy practitioner.

## Books Received

[All books received will be acknowledged in this column to be recognized by the contributor as the equivalent. Reviews will be made of these volumes according to merit and the interests of our readers.]

**Organic and Functional Nervous Diseases.** By M. Allen Starr, M. D., Ph. D., LL.D., Professor of Neurology in the College of Physicians and Surgeons, New York; ex-President of the American Neurological Association and of the New York Neurological Society. Second edition, thoroughly revised. Illustrated with 282 engravings and 26 full-page plates. Octavo. Cloth, pp. 816. Price \$6.00, net. Philadelphia and New York: Lea Brothers & Co., 1907.

**The Practice of Obstetrics**, In Original Contributions. By American Authors. Edited by Reuben Peterson, A. B., M. D., Professor of Obstetrics and Diseases of Women in the University of Michigan, Department of Medicine and Surgery, Ann Arbor, Mich. Octavo, cloth; pp. 1087; illustrated with 523 engravings and 30 full-page plates. Price, \$6.00, net. Philadelphia and New York: Lea Brothers & Co., 1907.

**Conservative Gynecology and Electro-Therapeutics.** A practical Treatise on the Diseases of Women and Their Treatment by Electricity. By G. Betton Massey, M. D., Attending Surgeon to the American Oncologic



Hospital, Philadelphia; Fellow and ex-President of the American Electro-Therapeutic Association, etc., etc. Fifth Revised Edition. Illustrated with Twelve (12) Original Full-page Chromo-lithographic Plates, Fifteen (15) Full-page Half-tone Plates of Photographs made from Nature, and numerous engravings in the text. Octavo, pp. 467. Cloth. Price, \$4.00 net. Philadelphia: F. A. Davis Company, Publishers, 1906.

#### **Syllabus of Lectures on Human Embryology:**

An Introduction to the Study of Obstetrics and Gynecology for Medical Students and Practitioners; with a Glossary of Embryological Terms. By Walter Porter Mantou, M. D., Professor of Clinical Gynecology and Professor Adjunct of Obstetrics in the Detroit College of Medicine; Fellow of the Zoological Society of London, of the Michigan Academy of Sciences, etc., etc. Third Edition. Revised and Enlarged. Illustrated with numerous outline drawings. 12mo, pp. 136; Interleaved. Cloth. Price, \$1.25, net. Philadelphia: F. A. Davis Company, 1906.

**A Compend of Genito-Urinary Diseases and Syphilis**, Including Their Surgery and Treatment. By Charles S. Hirsch, M. D., Assistant in the Genito-Urinary Surgical Department Jefferson Medical College Hospital. Illustrated. Cloth, pp. 351. Price, \$1. Philadelphia: P. Blakiston's Sons & Company, 1906.

**International Clinics**, A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, etc. By Leading Members of the Medical Profession Throughout the World. Edited by A. J. O. Kelly, A. M., M. D., with the Collaboration of W. Osler, M. D., J. H. Musser, M. D., J. B. Murphy, M. D., and others. Vol. IV. Sixteenth Series. Cloth. pp. 322. Price, \$2.00, net. Philadelphia: J. B. Lippincott Company, 1906.

**The Toxins and Venoms, and Their Antibodies.** By Em. Pozzi-Escot. Authorized Translation by Alfred I. Cohn, Phar. D. First Edition. First Thousand 12mo; Cloth; pp. 101. Price, \$1.00, net. New York: John Wiley & Son. London: Chapman & Hall, Limited, 1906.

**Physical Chemistry in the Service of Medicine.** Seven Addresses by Dr. Wolfgang Pauli, Privatdocent in Internal Medicine at the Univer-

sity of Vienna. Authorized Translation by Dr. Martin H. Fisher, Professor of Pathology at the Oakland College of Medicine. 12mo; Cloth; pp. 156. Price, \$1.25, net. New York: John Wiley & Son. London: Chapman & Hall, Limited. 1907.

## **Miscellaneous**

### **"A SURGICAL MATINEE."**

By Humor Rural, M. D.

#### **Characters:**

President Wetherill .....  
 .....Colorado State Medical Society  
 Dr. B. B. Slick.....Ridgway  
 Eminent Surgeon .....Denver  
 Dr. Sing—r.....Pueblo  
 Dr. Van M—r.....Denver  
 Country Physicians .....Colorado

Scene: Bohemia (Albany Hotel, Denver).  
 Time: 7:30 p. m., October 9, A. D. 1906.

President Wetherill—

The issue's plain, I take my stand.

No fee divide. You understand?

Dr. Sing—r—

I have a few suggestions to offer, which will bring this problem to a happy conclusion. I suggest a plan, which I long ago adopted in my practice, as a consulting surgeon. Let the consultant, by his appearance, dress and demeanor, assume position of superiority; in fact, elevate himself to such a plane of high morality that no town or country doctor would think of such a contingency, not alone broach it. Now I, I—

(Lights go out.)

President Wetherill—

We need more light on this subject.

Dr. B. B. Sl—k—

Kind Friends, Dear Sir, and Mr. President  
 My experience in this question I infer,  
 Will be of timely interest. Therefore I recall  
 That in days gone by I accompanied  
 To this city, a patient of means, in this  
 World's goods, well primed. The operation  
 Safely o'er, five hundred times the dollar  
 Passed into the surgeon's hands, but no  
 Provision was made for B. B. Slick. Alas!  
 "'Tis true tis pity, and pity 'tis, 'tis true."  
 Homeward depart, hotel bill, transportation,  
 Even car fare gone and four days' practice.  
 too.

Yet once again the Christmas tide draws nigh  
 With fond desires, and expectations high.

No greetings kind received from surgeon  
friend;

But comes, "God bless the mark," a rattle  
For my baby. With the waning year  
I am resolved with firm decision,  
And ere the winter's snow begins to fly  
My Hospital has reared its wall on high.

Eminent Surgeon—

In years gone by, I must admit,  
When friends were scarce, and patients few.  
A part of my fee, I'd demit  
I simply did what others do.  
'Twas only kindness of my heart,  
Desire to help, desire to serve  
The country doctor from the start.  
I had no other wish, observe.  
And now false friend arise again  
Impeach me to my face.

Some say that half the fee's too small  
That others beat me in the race.  
Twixt friend and foe, false friend and true  
I scarcely know what I should do.

Dr. Van M—r—

While I wish not to enter this "logomachy,"  
I here announce as my intention fixed  
To cause enactment, will proclaim  
Such practices illegal.

Country Physician—

Enough! Enough of legislation  
We say it without hesitation.

President Wetherill—

One sentence more, a brief digress  
Upon an allied matter.

I here announce my edict firm  
That no physician shall take lance in hand  
To operate, until skill, experience gained  
Proclaim him master of the art.  
You surely know you're tempting fate  
When you attempt to operate.

First Country Doctor—

Our ignorance and our weakness we deplore  
'Tis foolish we should ever strive to soar.  
The lesson learned, we will depart  
You may be sure, with humble heart.

Dr. B. B. S. (aside)—

My hospital is open wide and free  
So if you want a chance, boys, come to me.

Country Doctor (aside)—

We sometimes act without consent  
Or wish of Mr. President.

Exit, all lead by Drs. B. B. Sl—k, and Sin—r,  
In full regalia.

## Items

Dr. George R. Pogue, of Denver, has moved  
to Greeley.

Dr. Theodore H. M. Hotopp, formerly of  
Glenwood Springs, is now located in Leadville.

Dr. Maurice Kahn, of Leadville, was married  
January 21, 1907, to Miss Gertrude Berryman,  
a handsome and popular young lady of the  
Cloud city. Dr. and Mrs. Kahn are traveling,  
having been "sighted" in Denver, and will be  
at home to their friends after March 1st, at  
815 Harrison avenue. May much joy and hap-  
piness be yours.

## Humorous

**More Faith than Cure.**—"What is your opin-  
ion of the faith-cure."

"I am beginning to fear," answered the  
skeptical person, "that it requires hope and  
charity more than it does faith."—Washington  
Star.

**Always Silent.**—The food-inspector's wife  
was looking over her husband's notebook.

"George," she said, "how do you pronounce  
the last syllable of this word 'butterine?'"

"The last syllable," the inspector answered,  
"is always silent."—St. Louis Globe-Democrat.

**A Lost Art.**—She—"What interested you  
most in your travels, major?"

Major—"Well, the mummy of a queen I saw  
in Egypt. It's wonderful how they could make  
a woman dry up and stay that way."—Phila-  
delphia Inquirer.

**He Kept Quiet.**—"Mom," said little Patsy,  
"won't ye gimme candy now?"

"Whisht!" cried his mother, "didn't I tell ye  
I'd give ye none at all if ye didn't kape quiet?"  
"Yes'm."

"Well, the longer ye kape quiet the sooner  
ye'll get it."—Philadelphia Press.

**He Was Right.**—Howell—"Did that fellow  
who wanted you to invest have a sure thing,  
as he claimed?"

Powell—"Yes; I was it."—Judge.

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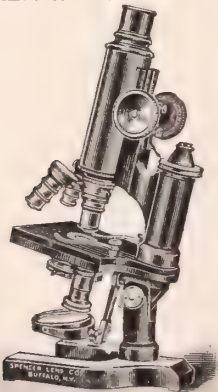
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# COLORADO MEDICINE

PUBLISHED MONTHLY BY THE COLORADO STATE MEDICAL SOCIETY.

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C. E. COOPER, M. D.

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Single Copies, 20 cents.

All communications to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are typewritten.

Communications and items of interest are invited from all parts of the state. Death notices, removals, changes of address, etc., are especially desired.

Secretaries of the County Societies are earnestly requested to report their meetings, including the subject matter of the papers presented, and in general, the substance of the discussions.

Marked copies of local newspapers, or clippings, containing matters of interest to the profession will be gratefully acknowledged. The name of the sender should be given.

The journal will be issued on the 15th of each month. All copy must reach the editor not later than the first of the month. Advertisements of proprietary medicines will be accepted provided the preparations advertised have been approved by the Council of Pharmacy and Chemistry of the American Medical Association. Address all communications regarding advertising to

JAMES M. BLAINE, M. D., *Adv. Mgr.*, 3-4 Steele Block, Denver, Colo.

## IMPORTANT NOTICE.

All members of the Colorado State Medical Society are entitled to a copy of this journal each month. Failure to receive the same, and change of address, should be promptly communicated to the editor.

VOL. IV.

DENVER, MARCH, 1907

No. 3

## Editorial Comment

### OUR DUTY TOWARD MEDICAL ORGANIZATION.

The purposes of medical organization, as stated in most constitutions of medical societies, embrace (a) the association of reputable qualified practitioners; (b) the advancement of all subjects connected with the art of healing and the public health; and (c) the unity and harmony of the profession. These subjects should be kept in mind with reference to the County Medical Societies first and foremost, and unless each member recognizes the necessity of his individual support, that body from which the most good can emanate is weakened. In order that the association of physicians may be accomplished the first requisite must be attendance, regardless of the lack of interest which the subjects announced in the programs may hold out to the individual man, or the supposition that an essayist is not quali-

fied nor experienced to present the same in a profitable or scientific manner.

When such an excuse prevails as a reason for one's absence, the propriety and sense of duty should crystalize a determination to aid in the elaboration of the subject by discussion, by contributing to the knowledge possessed by the supposed insufficiently informed, and thereby stimulate that which is most desirable on all occasions—*complete discussion*.

If opinions and the experiences of all men agreed with reference to nine-tenths of the subjects treated in medical meetings there would be no reason for debate, but fortunately for the science and yet unfortunately for the afflicted, they do not; and it is just here—in the mutual exchange of experiences and observations—that the greatest good can be accomplished, and the attendance is often repaid by valuable impressions from sources least suspected.

Papers should be written with a view of

inviting discussion and even friendly criticism, rather than with a purpose of launching vague theories or hypotheses upon incomplete foundations of immature study, and carrying the conviction of having been written for purposes of self illumination and, ulteriorly, commercialism.

As is well stated by Philip Mills Jones (*Bull. Am. Acad. Med.*) "The medical profession stands in peculiar relations to the general body politic. Its knowledge is a strange thing to even the well educated lay individual; its ethics are a thing not understood nor understandable by laymen; its members, through the whole course of their special training and their subsequent active lives are, by the very nature of their calling, moved away from the very elements which make for commercialism." it may be added, *if not so moved, the efforts in this direction should at least be avoided.* Self aggrandizement should have no place where fruitful observations are detailed for a common good. Appreciation and recognition will follow meritorious work along simple lines more readily than where attempts at revolutionizing are made.

Never before has the medical profession had such an opportunity to observe what could be done by concerted action as during the last ten years, and the unity and harmony in the county and state organizations are largely to be credited.

Surely no man would presume to ignore his indebtedness to the master students to whom medicine of the present time owes so much; he who has been privileged to feast upon these advances, culled, strained and digested, is in duty and morally bound to reciprocate at least in an attempt to place a tile to smooth the rough road of medical science for the easier progression of his followers; not to

do so is selfish in a degree beyond the sphere of a professional calling.

Then let every member indicate his loyalty by attendance, his interest and sincerity in the spirit of humanity toward man, (which belongs to the medical fraternity) by contributing the results of his experience to the common fund of knowledge, when the most desirable fruits of organization—unity and harmony—will have ripened into fact.

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### THE PURE FOOD BILL.

Among the many bills before the State Legislature which should concern the medical profession, House Bill No. 29, otherwise known as the Pure Food Bill, demands our attention as citizens, aside from its medical importance as a public health measure.

No law has been proposed which is of so much importance to the people of the state. Like other bills, it is not without its faults, some of the provisions will be difficult of interpretation and its enforcement will be hard upon some well-meaning but misguided proprietors, yet it should be as significant and obvious to them as to ourselves that the large and reliable drug concerns, whose reputation has been the result of the high standardization of their output and their open frank methods of marketing, have been the ones who enthusiastically supported the measure from the beginning and have willingly and unhesitatingly sought to carry out its provisions.

The bill as originally framed was effective in the line in which it was intended. An amendment was passed by the Senate but not approved by the House, exempting from the requirement of stating upon the label the quantity of narcotic or harmful substance where "any article defined in the United States Pharma-

copea or National Formulary or *compounded from such articles* by a regularly licensed pharmacist," was dispensed. The effect upon the section is apparent when it is stated that all of the articles stipulated as requiring mention on the label are official.

While it is admittedly unnecessary to place the percentage of opium and alcohol in paregoric on the label, or the amount of alcohol in tincture of arnica or spirit of camphor and the like, yet it would do no harm in comparison with the good to be gained by preventing unscrupulous druggists from compounding headache mixtures from *official* substances, under coined names, too deleterious for unrestricted use by the uninformed. Cough mixtures should, if the protection of the public is the object of the measure, state the quantity of morphine, codeine, chloroform or allied substance, they contain.

In brief, we believe that the druggists of this state should be subject to the same requirements as the manufacturing chemists and druggists outside of the state when the preparations are for the consumption of the people of our state. The only exemption from this should be the prescription of a regularly licensed physician, dental surgeon, or veterinary surgeon from the fact that the responsibility rests with him and not with the ignorance of the average patent medicine buyer or recipe fiend, whose source of supply is the Family Doctor Book or the newspaper.

#### ONE SOURCE OF ORIGINAL ARTICLES.

We have often been surprised to find articles apparently contributed to medical journals which were either owned, controlled or supported by the nostrum interests, by medical writers of the highest standing in the American Medical Association, and whose actions and expressions were opposed to the supporting of

medical publications which persist in the accepting of advertising from concerns who are and have been attempting to lower the dignity of the profession, but the darkness of our ignorance has been partly illuminated by the observation that "original contribution" is at times only *apparent*. The *Kansas City Medical Record*, in its February number, *reprints* in full, *without credit*, Dr. Richard C. Cabot's article, "Mind Cure: Its Service to the Community," as it appeared in the January issue of this journal, thereby allowing its readers to assume that it was contributed *exclusively* to that publication, and yet its policy is explicitly stated on the first page of the same journal, that "*no article will be considered for publication unless with the distinct understanding that it is contributed to this journal exclusively.*" The plagiarist has too long been the object of contempt among literary men to cause us to take our pen in repetition of the condemnation; the mention of the facts, which speak for themselves, seems sufficient in such cases to enable honorable men to properly classify the man according to the baseness of his deeds.

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#### BILLS OF MEDICAL INTEREST BEFORE THE STATE LEGISLATURE.

Among the 402 Senate and 502 House Bills pending action of the State Legislature, the following are thought to be of sufficient interest to the profession to warrant mention: Senate Bills: 111 (Morgan), to appropriate and build an insane asylum at Lafayette; 157 (Millard), a board of asylum commissioners and asylum for northern Colorado; 206 (Bardwell), to provide for feeble-minded persons; 238 (Anfenger), to establish a school and home for the feeble-minded; 351 (Booth), to regulate the practice of



osteopathy; 367 (Taylor), in relation to a western Colorado insane asylum. House Bills: 29 (Kelly), the "Pure Food Bill"; 85 (Hurd), improvements for the Colorado Insane Asylum; 150 (Kelly), to prohibit the giving of general publicity to treatment and devices for the cure or prevention of sexual, menstrual or rectal diseases; 157 (O'Connell), regulating the inoculation of animals with disease; 275 (Harbison), creating a board of pharmacy, etc.; 310 (Harbison), in relation to hospitals, dispensaries or other institutions for the treatment or care of the sick or injured; 341 (Fetzer), regarding the registration of births and deaths—establishment of a central bureau of vital statistics, etc.; 430 (Kelly), in relation to persons of unsound mind; 481 (Garden), concerning surgical operations, creating consultation boards in each county in this state; 489 (Cannon), to regulate the practice of osteopathy.

### THE STATE BOARD OF MEDICAL EXAMINERS.

The annual report of the Secretary-Treasurer has been filed with the Governor. It is the second under the administration of the new medical law and in it much space is devoted to its advantages, effectiveness, etc. The receipts and disbursements are stated as follows:

#### RECEIPTS.

Balance on hand Nov. 30, 1905....	\$ 256.45
License fees Nos. 5049 to 5277 incl.	5,590.00
	\$5,846.45

#### DISBURSEMENTS.

Salary, Secretary-Treasurer .....	\$1,500.00
Salary, Deputy Secretary-Treasurer and Counsel .....	600.00
Salary, Stenographer and Clerk....	1,200.00
Per diems and traveling expenses of members .....	1,073.45
Returned fees .....	230.00
Expense, Delegate to Council on Ed. A. M. A. ....	40.85
Printing .....	141.81
Postage .....	119.70
Telephone .....	79.92
Renewal of bond in Bass case....	10.00
Docket fees .....	30.00
Fireproof safe .....	180.00
Typewriter desk and file.....	75.15
Incidentals .....	105.26
Balance on hand, Nov. 30, 1906....	460.31
	5,846.45

The number of applicants for license last year was 271—four were duplicates and one for restoration; this is compared with the last year under the old law in which there were 403, of which nine were duplicates. Following this it is stated that "The superiority of the new law over the old is revealed by these statistics, but nothing short of personal contact with the applicants renders it possible to judge of the great improvement in the class of the applicants under the new law."

König and Roder (*Muenchener med. Wochenschrift*, 1906) call attention to a number of cases which illustrate the dangers of spinal anesthesia, which may be followed by more or less permanent paralysis. In one case the paralysis occurred from the umbilicus down, and persisted until death three months after the induction of anesthesia.

We are in receipt of the 1907 illustrated catalogue of medical and surgical books published by D. Appleton and Company, which will be sent to any physician, by them, upon the receipt of a postal card.

Hastings emphasizes the fact that if a child has growing pains, tonsillitis, anæmia and functional nervous disorders, the case is one of rheumatism and the heart is in danger.—*So. Med. & Surg.*

The English Christian Science healer, under whose care Major Whyte recently died, has been held for trial on a charge of manslaughter. The amount of bail required is \$10,000.

Severe and repeated headaches may be due to the unsuspected presence of otitis media, with or without mastoiditis.—*American Journal of Surgery.*

## Original Articles

### *FOUR CASES OF HEMORRHAGIC PANCREATITIS IN WHICH THE COMMON BILE DUCT AND PANCREATIC DUCTS HAD SEPARATE OPENINGS.\**

By O. P. JOHNSTONE, M.D., Boulder.

The infrequency of the diagnosis of pancreatic lesions, ante-mortem, and our lack of knowledge of the etiology of such conditions appears to furnish sufficient reason for reporting the cases following. The fact that in all these cases the common bile duct and pancreatic duct had separate openings, in one case the openings being widely separated, would seem to eliminate obstruction from gall stones as an etiological factor in these cases. The interstitial pancreatitis present in all, but particularly marked in cases 1, 2 and 4, may, by causing obstruction to the pancreatic ducts, be an immediate factor in the causation of the condition. Whether the bacteria observed in 1 and 4 were merely an agonal invasion, or have an etiological significance, cannot be stated, as no blood cultures or detailed blood examination had been made ante-mortem. I am indebted to Dr. Bassoe for permission to report case 4, and to the attending physicians of the other cases.

#### CASE I.

(Clinical Note.) The patient, Mr. W., aged 37, a grocer by occupation, entered the Presbyterian Hospital, Chicago, on Dr. Robison's service, July 23, 1905.

Family History: Unimportant.

Personal History: The patient had gonorrhœa twelve years ago; a soft chancre four months ago; he uses liquor freely—beer more than whiskey.

His present trouble began three months

ago with sudden swelling of the abdomen, accompanied by pain in the lower abdominal region, and vomiting. This attack lasted one and one-half days. His abdomen was rigid at that time and has "troubled" him ever since. Eating caused him pain, and for the last month he has taken only milk for nourishment. Thirst has been extreme.

Examination on entrance revealed the following condition: The patient is restless, walks with difficulty and with a tottering gait, is hoarse, and has only been able to speak in a whisper for the past two days. He attempts to vomit frequently. Respirations are deep, his breath having a sweetish odor. Liver dullness begins just about the right nipple. Posteriorly there is dullness three finger breadths below the angle of the scapula. The abdomen is greatly enlarged and tense. There is no sagging in the flanks when the patient lies on his back. The enlargement is everywhere uniform. Pressure three or four inches below the umbilicus causes him considerable discomfort. Resistance is greater on the right side. The liver border cannot be made out.

Death occurred suddenly about 36 hours after admission. His temperature while in the hospital ranged from 98 to 100; his pulse 120 to 124; respirations 28 to 40. A blood examination, made on entering the hospital, showed 3,284,000 reds, 11,600 whites and Hæmoglobin 60 per cent. No differential count was made. Urine: morning specimen, reaction, acid; specific gravity, 1.013; albumin and sugar present. Twenty-four hour specimen, 1,500 cubic centimeters; reaction, acid; specific gravity, 1.020; odor, peculiar; sugar, 5½ per cent. according to reduction test; total solids, 69.

The patient vomited a blood-stained material frequently while in the hospital. Otherwise he appeared fairly comfortable.

\*From the Pathological Laboratory of the University of Colorado.

He was conscious until a few minutes before death.

The clinical diagnosis was Diabetes Mellitus and Cirrhosis of the Liver.

*Autopsy:* The autopsy was held by the writer three hours after the patient's death, with the following findings:

*Anatomic Diagnosis:* Hemorrhagic and gangrenous pancreatitis; thrombosis of the splenic vein; fat necrosis in the omentum, mesentery, and retroperitoneal adipose tissue; fatty liver, heart and kidneys; acute parenchymatous degeneration of the kidneys, liver and spleen; chronic gastritis; chronic mitral valvular endocarditis; sclerosis of the aorta (slight); edema and hypostatic congestion of the lungs; gaseous distention of the stomach and intestines.

The body is that of a large, well-developed, well-nourished man, 5 feet 11 inches in length. The abdomen is greatly distended and its walls are tense. The distention is uniform. There is moderate tympany over the entire abdomen and in the flanks, and extending upwards to the costal arch on the right side, and to the fifth rib on the left side. Posterior lividity and rigor mortis are marked.

The fat in the abdominal wall is three centimeters in thickness. There is a great amount of fat present in the omentum, mesentery and appendices epiploicæ on the large intestine, and in the retroperitoneal tissue. The fat in many places has a bluish appearance, and contains scattered, opaque, sharply circumscribed, grayish areas from one to three millimeters in diameter. These opaque areas are especially abundant on the surface of the upper portion of the mesentery, and in the fat about the left kidney. The peritoneum is somewhat hyperemic. The stomach and intestines are distended with gas. The abdominal cavity contains about a litre of brownish turbid fluid which clots in

a short time after removal. It has a peculiar sweetish odor.

The appendix lies transversely and is adherent to the mesentery. Lying transversely, involving the pancreas, and passing downward on either side of the abdomen, is an enormous hemorrhagic mass, measuring 30 centimeters transversely by 25 centimeters on the left side, and 12 centimeters antero-posteriorly. Along the right side in the retroperitoneal tissue hemorrhagic material has dissected its way as low as the true pelvis. Upward it has dissected back of the stomach as far as the diaphragm and encircles the œsophagus and cardia of the stomach at this point.

The stomach contains much bloody mucoid material. The mucosa is hyperemic. The pylorus admits two finger tips. The rugæ are not obliterated on stretching.

The liver weighs 3,050 grams. It is soft in consistency, pale yellow in color, and a few fibrous tags are adherent to the under surface of the right lobe. The cut surface is pale yellow mottled with lighter, nearly white areas, and is greasy to the touch. The lobular markings are not distinct.

The gall bladder is of normal size and contains no concretions. The bile duct is patent; is not dilated anywhere, and bile can readily be forced through the ampulla of Vater. The duct of Wirsung is entirely separate from the bile duct and opens into the duodenum *two centimeters* to the left of the opening of the bile duct. No accessory pancreatic ducts can be found in this portion. The duct of Wirsung appears normal in every way throughout its length. The common bile duct on being laid open shows no change.

The pancreas measures 18 centimeters long and 7 centimeters broad at its head. It is entirely surrounded by an enormous



hemorrhagic mass made up of recent moist blood clot and much old dry and friable clot. The fatty tissue about the pancreas shows numerous points of necrosis and areas infiltrated with dark blood. In the fatty tissue just anterior to and below the pancreas, the areas of fat necrosis are especially numerous. The pancreatic tissue is mottled with grayish and hemorrhagic areas and is very soft and friable. This is more marked in the body of the gland.

The splenic vein 7 centimeters from its junction with the superior mesenteric vein, contains a yellowish white thrombus, firmly attached to its wall, and 1.5 centimeters long. One centimeter below this is a second similar thrombus, 8 millimeters long. The lumen of the vessel does not appear to have been entirely closed by either of these thrombi. The wall of the vessel in this region and proximally is hyperemic.

The hemorrhagic mass, including the pancreas, stomach, and one kidney, weighs 3,600 grams.

*Histological Examination.* — Sections from all the organs show numerous small vessels plugged with a rod-shaped bacillus with rounded ends, taking a polar stain, and destaining by Gram's method.

The myocardium, mucosa of the stomach and kidneys show numerous small hemorrhages. The myocardium, liver, and kidneys are markedly fatty.

**Pancreas:** Sections from the head show typical fat necrosis to a marked degree, both recent and old. Also large areas of gangrenous necrosis of the pancreatic tissue in all stages, shading off into small islands of comparatively normal tissue. The cells of the tubules appear low, and in places apparently contain fat droplets. Many vessels are plugged with bacilli, which are also present outside the vessels. Numerous hemorrhages are pres-

ent. The connective tissue is greatly increased in amount, in many places being rich in round cells. Polynuclear leucocytes are present in relatively small numbers.

Sections from the body of the gland show lesions similar to those above but much more marked, there being no normal tissue present in these sections.

Sections from the tail of the gland have a similar appearance; several of the vessels contain recent thrombi.

**Mesentery:** Sections show areas of recent fat necrosis surrounded by leucocytes and round-cell infiltration.

**Bacteriology:** The colon bacilli was recovered from the heart's blood, bile, and peritoneal fluid.

The staphylococcus pyogenes aureus was recovered from the peritoneal fluid.

#### CASE II.

Mr. R., aged 60, a druggist, was admitted to the University Hospital, Boulder, Colo., Sept. 6, 1905. Dr. E. B. Queal was the attending physician. The patient gives a history of having used liquor to excess for the past 30 years, whiskey for the most part. During the same period he was addicted to the use of morphine, at first taking it hypodermically, the last three years, per mouth, when he took as high as 6 to 8 grains at a dose. He gives a history of periodic attacks of "stomach trouble" dating back 20 to 30 years. These attacks occurred every three or four months, came on suddenly, usually at night, were accompanied by abdominal pain and vomiting, gradually passing off in about a week. Solid food caused distress at these times. No further details can be learned in regard to these attacks.

On Sept. 4, 1905, he was "up and around, but felt very poorly." He could give no definite symptoms. During the

night of Sept. 4th he was seized with intense abdominal pain, and remained in bed all day Sept. 5th. Hot water bottles were applied to his chest, abdomen, and feet, and he took large doses of morphine, 6 grains at a dose. At 3 a. m., Sept. 6th, he was seized with convulsions and Dr. Queal was called. During the day the patient was taken to the hospital in a semi-comatose condition. Urine withdrawn by a catheter several hours later

appeared to rest well, except for pain in his right shoulder, which he complained of frequently. He said on several occasions that he was "a very sick man." The diagnosis of uremia was made, and saline enema used. He died six days after admission to the hospital.

*Autopsy.*—The autopsy was held a few hours after death by the writer. The body had been injected with a formalin-arsenic embalming fluid at once after



Microphotograph from head of pancreas, Case 2. (a) Comparatively normal lobule. (b) Marked increase in intra-lobular connective tissue.

showed a large amount of albumin. No sugar was found in this specimen and was not tested for later specimens, which showed less albumin than the first taken. After the first day in the hospital he passed his urine involuntarily and the amount in 24 hours was not ascertained.

He vomited several times while in the hospital, remained in a semi-comatose state, arousing somewhat at times, and

death, so no bacteriological examination could be made.

*Anatomic Diagnosis.*—Hemorrhagic and gangrenous pancreatitis; fat necrosis in the pancreas, mesentery, omentum, and retroperitoneal tissue; multiple gastric ulcers; chronic gastritis; chronic diffuse nephritis; chronic mitral valvular endocarditis; sclerosis of the aorta; thrombi in abdominal aorta and splenic vein; fatty



liver; localized fibrous peritonitis; healed tuberculosis of both apices and tracheo-bronchial glands; bilateral fibrous pleuritis; calcareous nodules in the spleen; general anasarca; edema and hypostatic congestion of the lungs; left hypothorax.

The body is that of a well-developed, somewhat emaciated man, 178 centimeters in length. Rigor mortis and posterior lividity are marked. The tissues everywhere pit moderately on pressure.

The fat in the abdominal wall measures two centimeters in thickness. The omentum covers the entire abdominal viscera, reaching down into the pelvis, and is adherent to the anterior abdominal wall in the median line. The abdominal cavity contains about a liter of fluid, which smells strongly of formalin. The appendix lies behind the cæcum, is four centimeters long, is sharply folded upon itself at the centre, and is bound to the posterior wall of the cæcum by fibrous adhesions. The lower border of the stomach is two finger-breadths above the umbilicus. The liver is at the costal arch in the right mammary line. The lesser peritoneal cavity is partly obliterated by fibrous adhesions. The surface of the pancreas, fatty tissue in the omentum and mesentery near the pancreas, and the retroperitoneal tissue in the vicinity show numerous yellowish-white, more or less circular opaque areas varying in size, the largest measuring three millimeters in diameter. These areas are more numerous in the fatty tissues immediately about the pancreas. The anterior surface of the pancreas is of an irregular dark necrotic appearance, interspersed with dry whitish areas. The fatty tissues about the pancreas, hilum of the kidney, and beneath the ascending colon is infiltrated with recent blood.

The base of the aorta contains a few thickened opaque areas. The thoracic portion shows more marked changes, one

area in the arch being calcareous. The abdominal aorta is markedly sclerotic, its lining being uneven, opaque, and in places calcareous. Two thrombi are adherent to its anterior wall; the lower one four centimeters above the bifurcation, the upper one five centimeters above this and at the mouth of the renal artery. This upper thrombus measures 1.5 centimeters long and one centimeter broad, and is firmly adherent to the aortic wall.

The lining of the stomach is hyperemic, and covered with an excess of mucous. The rugæ are prominent and are not obliterated on stretching. Surrounding the cardiac orifice are numerous ulcers, some circular in outline, others irregular. Their edges are smooth and sloping. The floors of the ulcers are uneven and gray in some, smooth and of a dark color in others. The largest ulcer measures three centimeters in length, and one centimeter broad. Similar ulcers are present in an area on the posterior wall of the pyloric portion of the stomach.

The liver is rather smaller than normal, and measures 21x17x9 centimeters. The under portion of the right lobe has been slightly torn in removal. Otherwise the surface is smooth and of a yellowish color. On section the cut surface is of a mottled pale yellow color. The lobular markings are fairly distinct.

The pancreas measures 20x6x4 centimeters. Its surface is irregularly dark and necrotic in appearance, with numerous scattering dry white patches of varying size. On section the tissue shows areas of old and recent hemorrhage. Pinhead-sized areas of fat necrosis are scattered throughout the gland. In many places the cut section is soft and necrotic in appearance, especially about the hemorrhagic areas.

The wall of the splenic artery shows a few opaque areas, but otherwise appears normal. The splenic vein contains a mixed



blood clot about ten centimeters from its junction with the superior mesenteric vein. This clot is apparently not adherent to the wall of the vein, which is smooth and appears normal.

The contents of the duodenum is bile stained, and bile is readily expressed through the ampulla of Vater by pressure on the gall bladder. The duct of Wirsung opens into the duodenum eight millimeters below the opening of the common bile duct. A small probe passed into either duct meets with no resistance. The circumference of the duct of Wirsung at a point 1.5 centimeters from its opening into the duodenum is eleven millimeters. That of the common bile duct at a corresponding point is 14 millimeters. Neither shows any apparent dilatation when laid open. The lining of the pancreatic duct is pale and smooth throughout its length, and no concretions or other obstructions are found. The gall bladder and bile tracts are free from concretions or other apparent obstructions, and the mucosa is smooth and appears normal.

The medulla of the left adrenal contains a hemorrhagic area six millimeters in diameter.

*Histological Examination.*—Myocardium: There is hyperæmia and a few small hemorrhages.

Stomach.—The mucosa is hyperæmic. The glands are separated by an increased amount of connective tissue.

Gastric Ulcer (from fundus).—The mucosa in one place is eroded away down to the muscularis mucosa. The wall of the ulcer is sloping; the floor fairly even and covered with a small amount of mucous and debris. A few vessels below the floor of the ulcer are filled with recent, others with organized thrombi. The connective tissue beneath the ulcer is only moderately increased in amount. At the edges of the ulcer and at places in the floor there is a moderate infiltration of

round cells, polynuclear, leucocytes, and plasma cells. This infiltration is limited and small in amount.

Pancreas (head).—One section shows great areas of hemorrhage, recent and old, interspersed with areas of necrotic tissue, and old and recent fat necrosis. Where the pancreatic tissue is recognizable the cells of many of the glands appear low and small, and the lumen dilated. Other glands are small and distorted and there is very marked increase in connective tissue within the lobules, also between them. There is much fat in the interstitial tissue, and many glands appear to have been replaced by fat. These areas of recognizable pancreatic tissue shade off into necrotic nonstaining areas.

A second section shows comparatively little necrotic tissue. There are numerous small recent hemorrhages. The interlobular connective tissue is increased. In many lobules the intralobular connective tissue is very greatly increased in amount, crowding and distorting the glands and causing the entire disappearance of many of them, while in other lobules the amount of connective tissue appears normal. In places the increase in connective tissue appears to be old, in others recent, the latter areas being rich in nuclei.

Pancreas (body).—Similar changes are noted in the body of the gland.

Pancreas (tail).—Sections show changes similar to those described above, the changes here being extensive and marked. The islands of Langerhans in all sections show no especial changes.

#### CASE III.

Mr. W., aged 52, a farmer, was found dead on his farm at 6:30 p. m., last having been seen alive at 11 a. m. that day. Two weeks before his death he had complained of a severe pain in his back and abdominal region, "different from anything he had ever had before."

From the son's statement this pain apparently lasted more or less constantly till his death. No definite history of the case can be obtained.

An autopsy was held by the writer the day after the body was found. The body had been injected with formalin before the autopsy so no bacteriological examination could be made.

*Anatomic Diagnosis.* — Hemorrhage into the pancreas; small hemorrhage into pelvis of right kidney; fatty infiltration and dilatation of right heart; hypertrophy of the heart; chronic mitral valvular endocarditis (slight); sclerosis of the aorta (slight); chronic gastritis; hyperemia of kidneys, liver and spleen; hypostatic congestion of lungs.

The body is that of a well-nourished man 171 centimeters long. The face is cyanotic. The sclera are hyperemic. The pupils are equal in size and four millimeters wide. The muscles in the thoracic and abdominal wall are normal in color. Rigor mortis and posterior lividity are present. The costal cartilages are ossified. The sternum is S-shaped protruding forward markedly above, due to an old fracture. The omentum contains a moderate amount of normal appearing fat. It covers about two-thirds of the abdominal viscera. The peritoneum is smooth and glistening, that of the small intestine being moderately hyperemic. The abdominal cavity contains about a litre of embalming fluid smelling strongly of formalin. The appendix lies free, points directly toward the symphysis pubis, measures five centimeters in length, and has a mesentery of its own for four centimeters. The lower border of the stomach is four centimeters above the umbilicus. The liver extends one centimeter below the costal arch. The abdominal cavity is free from adhesions. The foramen of Winslow is patent. The lesser peritoneal cavity contains a few fib-

rous adhesions. The pancreas appears as a glistening recent blood clot lying transversely across the abdominal cavity. The fat in its immediate vicinity is in places infiltrated with recent blood. Elsewhere the fatty tissue appears normal.

The stomach contains about 100 cubic centimeters of a viscid reddish material of a sweetish odor and taste. The mucosa is hyperemic and covered with mucus. The rugæ are prominent, and do not disappear on stretching. The pylorus readily admits one finger tip.

The gall bladder is free from adhesions. No concretions are present. It contains a reddish bile. The bile tracts appear in every way normal.

The pancreas measures 21x5x3 centimeters. The organ is hemorrhagic throughout, more markedly so in the anterior portion and head. The hemorrhage is recent, and on section blood drips freely from the organ everywhere. In a few small areas the blood is darker colored and clotted. These areas are most numerous in the head and fatty tissue in this region. No areas resembling fat necrosis are seen. The common bile duct and duct of Wirsung enter the same sheath as they pass through the wall of the duodenum, but empty by separate mouths into the duodenum, being separated for the last few millimeters by a very thin membrane. No concretions or other obstruction is present in either duct. The wall of the bile duct appears normal in every way. The lining of the pancreatic duct is hyperemic throughout its length, with several dark hemorrhagic areas in the distal half of its length, at irregular intervals. One of these areas measures one centimeter in length, with several smaller ones a few millimeters beyond. The splenic artery and vein show no changes.

The kidneys are normal in size and consistency. On section the edges are

slightly retracted. The capsule strips readily, leaving a smooth surface. The cut surface drips with blood. The markings are fairly distinct. In the upper part of the pelvis of the right organ is a dark blood clot measuring 1.5 centimeters in its longest diameter.

*Histological Examination.*—The myocardium, liver and adrenals show marked fatty change. There are numerous small hemorrhages in the myocardium. The stomach shows no changes.

*Pancreas (head).*—Sections show extensive recent hemorrhage into the interlobular connective tissue and within the lobules. The interlobular connective tissue is increased and contains much fat. There are irregular areas of connective tissue within the lobule separating and distorting the gland tubules. Some of these areas are rich in nuclei. Apparent islands of Langerhans are very numerous. In places there is marked fatty infiltration within the lobule. No areas of fat necrosis are found. Sections from other portions of the organ shows similar changes.

#### CASE IV.

Mrs. B., age 48, has had four children and one mis-carriage. She had "puerperal fever" fifteen years ago. Since then she has not been sick. The present trouble began eighteen days before death with sudden and severe epigastric pain, followed later with nausea and vomiting. A cathartic was given and was followed by two bowel movements twenty hours later. The pain, nausea, and vomiting continued. She was admitted to the hospital two days after the attack began. The face was flushed and the expression anxious. The chest was normal. The abdomen was tympanitic and tender, and there was pain throughout its extent. The temperature on admission to the hospital was 99.4; pulse, 108; respira-

tion, 22. Appendicitis was suspected, and she was operated the day of the admission. An incision was made over the appendix, then another in the median line. Nothing was found except a large amount of bloody fluid. A fecal fistula was established and the wounds closed. The urine the next day showed albumin, hyaline and granular casts, but no sugar. Later examinations showed the same findings. The following week the temperature ranged from 98.6 to 101, gradually rising to 103.2 before death, which occurred sixteen days after the operation. The pulse ranged from 112 to 120. Yellowish areas in the omentum observed at the operation were later recognized as fat necrosis. The real nature of the trouble was not suspected till the autopsy, which was held one hour after death by Dr. Peter Bassoe.

*Autopsy Record.*—*Anatomic Diagnosis.*—Gangrenous pancreatitis. Multiple disseminated fat necrosis of the subperitoneal adipose tissue; acute degeneration of the kidneys; sero-fibrino-purulent peritonitis; hyperemia of the liver and spleen; fatty liver; two recent laparotomy wounds; fecal fistula.

The body is that of a well-developed, well-nourished woman. Body heat is present. Rigor mortis is absent. There are a few small ecchymoses and a hyperemic area on the left arm, (from hypodermic injections). There is a layer of fat three centimeters in thickness in the abdominal wall. There are two laparotomy wounds; one, median, extending downward from a point two centimeters above the umbilicus, over half way to the pubes; another parallel to Poupart's ligament on the right side, about half way between it and the umbilicus. The latter wound is closed except for a superficial defect; at the lower end of the former is an opening into an adherent loop of in-



testine, and in its upper half a small opening into the peritoneal cavity through which a turbid grayish fluid exudes.

The intestines are matted together, and in places bound to the parietal peritoneum by loose adhesions. Flakes of fibrin can be scraped from them. A moderate amount of turbid grayish fluid is present.

The omentum contains much fat, and is studded with yellowish, sharply circumscribed, slightly raised, flat areas, one to five millimeters in diameter. Similar areas are also present on the mesentery, and several are seen on the parietal peritoneum. The meso-sigmoid is thickly studded with similar areas. Ecchymoses are also seen in places in the omentum. The liver does not extend below the costal margin. The gall bladder is free from adhesions. The uterus and appendages are free from adhesions. Behind the stomach and transverse meso-colon is a large cavity with dark necrotic walls studded with yellowish areas of a darker more orange hue than those described above. In this cavity lies the pancreas, the caudal portion of which is connected with a soft foul smelling, light gray mass with numerous firmer light yellowish or whitish areas. The necrotic tail of the pancreas, with the colon is adherent to the spleen.

The gall bladder is of about normal size. Its mucous membrane is normal. There are no concretions. The bile ducts are patent. The common bile duct is 17 millimeters in circumference at its widest point; its mucous membrane is normal. The common bile duct and pancreatic duct have separate openings into the duodenum.

Of the pancreas it remains to be said that the head is of nearly normal firmness, and on section is grayish, with small reddish points; the markings of the cut surface of the head are distinct. The portion of the pancreatic duct nearest the

duodenum is normal in appearance; its opening into the duodenum is near to but independent of that of the common bile duct.

The caudal portion of the pancreas is likewise fairly firm in consistency with irregular softened areas scattered through the firmer portion. The markings of the firmer portion are well preserved. This caudal portion is attached to the head by fibrous shreds and vessels passing through the soft necrotic and foul smelling body of the organ. The caudal portion measures 5x6 centimeters. The remaining head portion is seven centimeters long.

*Histological Examination.*—Omentum.—Sections show recent and older areas of fat necrosis.

Kidney.—Many of the glomeruli are fibrous; others are cystic; still others show a thickening of the capsule. Some are normal or merely swollen. The cells of the convoluted tubules are ragged and granular. The connective tissue is markedly increased in amount, its distribution being irregular. Several healed infarcts are seen. The vessels are engorged with blood.

Mesenteric Lymph Gland.—There is a proliferation in the sinuses and considerable yellowish granular pigment.

Pancreas.—Sections from the head of the pancreas show a marked increase of connective tissue, both inter and intra lobular, in many places rich in cellular elements, round cells, plasma cells, and a few polynuclear leucocytes. Several areas of hemorrhage are seen and considerable yellowish granular pigment, apparently hematoïdin.

There is a large amount of fat both in the trabeculae and within the lobule, some lobules being largely replaced by it. Recent and a few old areas of fat necrosis are distributed throughout the section.

In many places the tubules appear nor-

mal. Other places show marked granular degeneration, areas of coagulation necrosis and gangrenous necrosis. Many of the glandular elements are atrophied, in others the tubules are dilated and filled with a granular, eosin-staining substance. The islands of Langerhans appear relatively increased in number, and many of them contain an increased amount of connective tissue. Numerous areas of round-celled infiltration are seen within the lobules. The pancreatic ducts appear to be increased in number and many of them are widely dilated. Some of the vessels are packed with bacteria and bacteria are also seen in a few areas outside of the vessels. They are of two kinds: one, a rod-shaped bacillus with rounded ends and destaining by Gram's; the other, a small coccus retaining Gram's and arranged singly, in pairs, and in chains of four or five.

**Pancreas (tail).**—Sections from the tail show changes similar to those described in sections from the head, only the connective tissue changes are more marked, in many cases the entire lobule being replaced by it. The vessel walls are moderately thickened, and many of the vessels contain recent thrombi. The connective tissue around the bile ducts is greatly increased.

**Bacteriological Examination.**—The colon bacillus was recovered from the spleen and peritoneal fluid.

#### Discussion.

The President: This paper, and the case reported, opens up a very valuable field for discussion, and the members of the society now have an opportunity to discuss these interesting problems.

Dr. Wm. N. Beggs, of Denver, was asked to open the discussion. He said: Mr. President, and Members of the Society. Your reference to hemorrhagic pancreatitis being one of the most interesting of the subjects of the newer medicine is practically what I meant to say in beginning this discussion. It seems to me, that

in the last few years we are having more reports of cases of acute hemorrhagic pancreatitis as true forms of disease, or combined under the one title, than in years past, although the disease has been known for many years. I believe that Zenker was the first to call attention to this subject.

We should distinguish between two different conditions one which has been classified by Mayo Robson as the ultra-acute form, which is to be regarded as a primary hemorrhagic condition with the inflammatory phenomena added as a result, and the other, the acute form, which is to be regarded as an acute parenchymatous pancreatitis with the hemorrhagic condition super-added.

The description in the paper of the marked presence of interstitial pancreatitis, which in some cases was distinctly of more or less chronic form, is of interest in these particular cases, as we unquestionably are having added here an acute exacerbation to the causes which have been existing for a longer period of time. I take it, of the cases which the doctor has described, the third, in which the man was found dead, was, so far as I can judge, from the description given, one of the acute cases, the cases in which the hemorrhagic condition was pre-existing, due possibly to lesions of the blood-vessels either incident to the age of the patient, or to existing renal disease, or to alcoholic or syphilitic habits, or possibly to an infection of another type. The other cases, I take it, are cases of acute parenchymatous pancreatitis. All of the cases probably were of an infectious nature, and I believe that the parenchymatous form of pancreatitis is in nearly all instances toxic, the toxin which acts being variable, but nevertheless, it is a toxic disease.

Of particular interest is the question of diagnosis. Unfortunately, the question of diagnosis is one about which there is very little to be said. We can say nothing practically because we know so little about the means of diagnosing this fulminating form of disease. Of perhaps more interest is the question of the cause of death. These cases of hemorrhagic disease are frequently productive of sudden or rapid death. Death certainly cannot be due simply to the hemorrhage, as there is not a sufficient loss of blood to produce it. Any one who has had experience with the various stages of hemorrhage which we may and do have in cases of pulmonary tuberculosis when the patients are recovering will recognize the fact that the loss of blood is not sufficient to be

regarded as a cause of death. A view which has been advanced, is that pressure, stretching, or mechanical injury to the celiac plexus is the cause of the fatal result. Another one which will call for further investigation is that possibly the cause of death is due in these cases to a total suspension of the so-called internal secretion of the pancreas. The islands of Langerhans in the course of extensive death of the pancreatic tissue are involved, the function of which, as expressed in Sajous' work, is to preserve the organism against the toxic products of albuminoid metabolism. That, of course, is a question upon which we cannot, with our present data, express any definite opinion.

With reference to the case of Hodgkin's disease, I would not care to say a great deal. I have not had an opportunity to examine the patient, and my own opinion is that Hodgkin's disease is an entity which may in some cases have as an etiological factor the tubercle bacillus, but we are not justified at present in asserting that that is the cause of the disease. We might regard it as a form of tuberculosis simulating tuberculosis of the skin, still we are not justified in arriving at this conclusion.

Dr. Frank E. Waxham: The case of Hodgkin's disease that has been presented reminds me very forcibly of one I saw some four or five years ago. The case was that of a young man, some 23 or 25 years of age. The enlargement of the glands of the neck was even greater than in the case that has been presented to you this morning. There was likewise a tumor of the liver as large as a fist, that could be very clearly outlined. This case was extreme. It was an inoperable case, not only so decided by myself, but by two surgeons who saw the case as well. This patient was placed upon the X-ray, and the results were simply marvelous. The enlargement of the glands in the course of three months entirely disappeared. The tumor of the liver also disappeared under the use of the X-ray. The neck became perfectly normal; there were no unpleasant or bad results from the use of the X-ray. Two years later the tumors of the neck and the tumor of the liver had not returned. A year later I heard from the patient, and he was still well.

I have cited this case simply to show the wonderful results that can sometimes be obtained from the use of the X-ray in these cases.

## REMARKS ON TREATMENT OF NEURASTHENIA.

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In the early eighties, when Beard forced the medical profession to recognize the importance of the neurasthenic state as a morbid entity, neurasthenia must have been exactly described as an idiopathic disease. To the neurasthenic patient the signs of nervous exhaustion still appear of this nature. He is ill at ease, lacks energy, is weary, unfit, sleepless, all for no apparent reason. He may or may not have pain, but even the presence of this importance diagnostic sign, because of its shifting character, only adds to his perplexity. To the physician of to-day, who has often noted cause of disease become effect in that a previous directing factor is discovered, idiopathic conditions have practically been wiped from the slate. Instead—it is true in very general terms as yet—we speak of toxemias as the cause of disease formerly deemed of primary origin. Doubtless it may be said, this is merely shifting the view-point, since now the toxemia, until its cause is known, becomes the idiopathic factor. However, granting this, the conception that various systemic intoxications cause disease, represents scientific progress and some of it lies in the suggestion for rational treatment, which aims to correct a pathologic physiology instead of using drugs to combat symptoms.

The subject of systemic toxemias is vast, in its potential combinations almost limitless, for aside from intoxications inorganic, of which the mineral poisons are the most important, and toxemias resulting from cellular structures, animal and vegetable, all of which may be taken



into the body and are therefore causes which act from without, the question of systemic intoxications possesses yet other problems of equal importance. These refer to the study of deranged body chemistry wherein substances themselves normal to organic metabolism, become poisons because they are absorbed by the system as intermediate products of this metabolism instead of being continued in chemic elaboration up to excretory end-bodies. We know, also, that normal excretions which for some reason have passed beyond the limits of an anatomic area usual for them, also become toxic, as for instance the destructive effect, during life, of normal bile upon the pancreas. All these facts suggest that in the complex conditions arising from systemic toxemias of all kinds, antitoxic reaction on the part of the organism itself must be the chief factor in the restoration of normal organic function and that our various therapeutic measures are beneficent only where they help nature to neutralize poisons or assist in other body processes conservative in character.

To treat a patient from this point of view, which means less consideration for disease entity, individual symptom or indeed for a pathology of form in general, than an attempt to correct physiological derangement, must in our present development of pathology, seem presumptuous as regards many diseases, yet such procedure offers the best hope of success in neurasthenia. Oddly enough, it is in relation to a pathology which pertains directly to this intangible, elusive condition,—that is, a physiological over-fatigue, of which neural exhaustion is but one element,—that organic toxins have been conclusively demonstrated. Monari found xantho-creatinin in the aqueous extract of muscles of an exhausted dog and also in the urine of soldiers tired by several

hours' march. Vaughn and Novy<sup>2</sup> say, "Xantho-creatinin given in fairly large doses is poisonous, producing in animals depression, somnolence and extreme fatigue, accompanied by frequent defecation and vomiting. This base appears in the physiologically active muscle at the same time with creatinin, sometimes in about one-tenth quantity of the latter."

Mosso experimented as follows in 1890: A dog was fatigued by long continued running. Some of his blood was then transferred into the vessels of a second dog from which an equivalent amount of blood had been withdrawn. As a result, the second dog exhibited the phenomena of exhaustion. Recently Weichart of Berlin has made the initial claim as regards isolation of a true toxin of this nature. Experimentation in reference to fatigue toxemia has been confined to systemic effect of muscle exhaustion, yet the fact that organic poisons are produced only by physical over-exertion will be contended by none, since continued mental labor and also mental stress due to worry will develop an identical picture of neural fatigue.

In the following observations upon the treatment of neurasthenia, no complete resumé of the subject is attempted. My remarks are chiefly determined by the development of some methods which have proved useful to me. I have thought that perhaps one or another of them might be serviceable to others as an addition to practice now employed and that discussion which the paper may provoke, might elicit other practical points. I also wish to say that treatment discussed refers only to *ambulatory cases* of neurasthenia, the kind that constitutes the great majority of those we see. That most

<sup>2</sup>Cellular Toxins. Fourth Edition, p. 458.

neurasthenic patients will have nothing to do with hospital treatment because of its removal from business and home affairs, its confinement to bed, constant observation and exact regime in other ways, unless compelled to take the step by complete exhaustion, we well know. Out of the same social condition develops this 458.

fact: that *prophylaxis* to which we would wish to turn with enthusiasm plays but an inconsiderable role in the therapeutics of the disease here discussed. Much of neural exhaustion we are called upon to treat is an essential product of our mode of life. Against the mandates of necessity and of luxury, of present needs and the efforts necessary to secure a future competence, any advice which requires removal of the patient from his sphere of activities becomes, as a rule, of only theoretical interest to him. Hence, the physician must needs devote himself to the amelioration of a condition rather than the rational prevention of it.

Under the head of *removal of cause* may be included appropriate treatment of concurrent diatheses of neurasthenia. If careful inquiry elicits influence of constitutional taint from syphilis, gout, malaria, diabetes, etc., the physician will naturally address himself to the betterment of these conditions, and the same would be true of nervous exhaustion due to effect of extraneous poisons such as lead, alcohol, opium, etc.; however, in most cases, no such clear indication for specific therapy exists. Having in view, therefore, *treatment*, limited by certain material facts, particularly social conditions which, precluding a rational prophylaxis, present in themselves a formidable morbid cause, we consider, first:

*Elimination, (a) by the bowel.*—My preference is in the prescribed use of Carlsbad salts and a daily rectal injection. The genuine Carlsbad salts may al-

ways be recommended as efficient but I obtain equally good results from the artificial Carlsbad salts, imported or domestic, which are handled by reliable firms. The patient is not to be severely purged. I aim to give just enough of the salts to effect one or possibly two, movements together with a softening up of all the bowel contents, after which the colon is mechanically cleansed by the enema. I believe that for neurasthenia, salts possess a number of points in their favor over vegetable purgatives. They are far less apt than the latter, to give a bowel movement which satisfies the patient and yet leaves the mucous membrane coated with feces which clinically we recognize in the continuance of intoxication symptoms.

Catarrhal bowel conditions, often present in neurasthenia, are benefited by occasional use of purgative salts. In this connection the use of the latter for dysentery in tropical countries may be recalled. Carlsbad salts increase also the specific gravity of the urine which means increased elimination. It may be suggested that the constant use of salines tends to anemia. Their constant administration merely to overcome bowel atony would be bad practice and equivalent to continued withdrawal of normal blood elements from that tissue. But in cases of chronic toxemias which to come to us in the guise of biliousness, sick headaches, uric acid affections, etc., I have seen only good results from the taking of Carlsbad salts (along with other appropriate treatment), so long as active elimination was indicated. Aside from this fact, however, iron may be used as a safeguard against undue depletion in any case. On the other hand, iron is mainly effective only after abnormal bowel fermentation has been corrected.

Elimination begun by the laxative dose of salts is materially furthered by the

daily enema. This may be taken at any time in the day. Often it is found that the colon empties itself better at one time than at another, a fact which must be considered in this connection. Some patients finding the relaxation of an enema conducive to sleep, flush the colon just before retiring. The water, in amount from two and a half to three quarts, should be comfortably warm and unless a medicament is added in accordance with some special indication, should be plain. Soap is unnecessary and salt often added so as to produce approximately a normal salt solution is incorrect procedure, because the water is then taken up by the tissues, whereas, in this case, it is desirable that practically all the water be returned and the colon be cleansed in this way by mechanical action. Good results from colonic flushing depends greatly upon the technique employed, therefore, the latter is dwelt upon in detail to each patient, who is instructed about as follows, viz.: He shall obtain a three-quart, rapid flow fountain syringe, fill with comfortably warm water and to hang the bag about seven feet from the floor. He may take the enema while reclining, lying on the back or left side, but a better posture which permits ready flow of water into the bowel and yet, with a full colon, involves less strain on the abdominal muscles on arising, is a stooping position—the patient sitting on his heels as the saying is—the left arm resting on a chair or other object of suitable height, thus supporting the body in this attitude. The syringe nozzle, after suitable lubrication, is to be inserted only just within the sphincter. This is important in men, on account of possible irritation of the prostate. As the water begins to flow, the rubber tubing is pinched by the thumb and finger so as to permit only a small stream to enter the rectum as full force at this time will result in immediate ex-

pulsion of the enema. After several ounces of water have entered the rectum, a seemingly insuperable obstruction to more fluid is felt. The water must not be expelled but, with the tube bent on itself the flow is stopped until the water in the lower bowel has worked its way upward. With pinched tube the water is again permitted to flow until a second obstruction requires it to again be stopped, etc. After a time the action of the sphincter is less imperative and the balance of the bag-contents may be permitted to flow into the bowel at full force without further interruption.<sup>2</sup>

The patient is warned to let water enter the bowel till it feels full (presumably the transverse colon filled), and to avoid taking that additional amount that will cause pain in the right side of the abdomen (pressure against the ileo-cecal valve). The full bowel is permitted to empty itself at once. There should be no attempt to retain the water; on the other hand, the patient must not strain to remove it.

I order no colon tube attached to the syringe nozzle, for the ambulatory patient would not long bother with it, nor could he insert it well himself. Not infrequently large pouch-like formations of the sigmoid exist and in such persons an injection of three quarts of water would not reach the transverse colon. Even in these cases, however, objection to the use of the colon tube by the patient remains, and, although the toilet of the lower bowel would be left incomplete, yet in the end the effect would be much the same; viz., passing on of the bowel contents accomplished and

<sup>2</sup>Sometimes relaxation of the sphincter can be better prevented, if in the beginning of the injection, the flow of water is rhythmically started and stopped twenty or thirty times by alternately pinching the tube and relaxing this pressure, the column of water acting as a ram to overcome fecal obstruction.



with this action, elimination furthered. The patient is also to be advised that unless the enema be taken with due regard to detail he will waste his time with no advantage gained. A not unusual custom of some patients to inject a pint to a quart of water into the bowel, expelling this amount and repeating the procedure, is not only of little worth, but at each successive intake of water, the sphincter becomes more irritable and the bowel able to retain less fluid. Therefore if the patient fail at any one time to get a sufficient amount of water into the bowel, he should not repeat the injection for several hours.

(b) As regards urinary elimination, I encourage the drinking of water up to six or eight glasses a day. The water should be poor in salts so as to prove the more ready solvent. Lately a Denver colleague has warned against the use of much water in nephritis on account of the additional work given to the kidneys. It is not always easy to be certain one has to do with nephritis, because kidney congestion will also produce albumen and casts. I believe that one may safely take this position; that patients suffering from toxemias which produce neurasthenic symptoms, whether or not kidney congestion exists, are better for drinking daily a considerable quantity of water unless the condition of the heart or arteries present a contra-indication. Diuretic drugs will be required but rarely.

Every form of treatment or hygienic regime instituted for the neurasthenic patient might well be included under the head of the next topic, viz., *improvement of tissue metabolism*. However, I shall only consider under it two principles of medication whose practice, I believe, can be said to effect specific results on rational grounds. The first of these principles refers to an accepted therapeutic rule. It is our custom, when prescribing for various chronic dyscrasias to use arsenic, qui-

nine, or phosphorus. For immediate tonic effect, we usually select quinine; we use arsenic as an alterative slower in action or when we wish to stimulate the formation of corpuscular blood elements; and phosphorus where anything like specific effect on bone or neural tissue is intended. Yet withal exact discrimination in the use of these remedies is lacking. Without doubt systemic influence even of the elements or of pure alkaloids is often manifold, and, therefore, I do not bespeak limitation of chemic action of these drugs when I say that probably a paramount effect in the use of each is to retard that increased retrograde metabolism which occurs during systemic morbid processes. Without the body, quinine, phosphorus and arsenic prevent decomposition by opposing oxidation, while as regards systemic metabolism, much evidence can be adduced to show that they retard body chemistry by the same means. In this light, our customary empiric administration of small doses of these remedies for tonic effect, in conditions of chronic morbidity becomes rational in that the attempt is made to oppose tissue waste during periods of increased katabolism. On the other hand, the heaping up of the products of this same retrograde metabolism makes necessary an increased elimination. Clinically, this condition is recognized by the invariable initial purge in the treatment of an infection or other intoxication. But we need also recognize that the body in diseased conditions must often fall short in its added labor of sufficiently elaborating the increased intermediate products of body chemistry, thus permitting their elimination as end products. We must assist nature at these times by measures aimed to increase systemic oxidation. The inhalation of pure oxygen for this purpose is well known. This procedure is of great assistance where oxygen can

be directly utilized by the lungs, but where a continued oxygen hunger of the tissue exists with pulmonary respiration taxed to its utmost, the inhalation of pure oxygen is of little worth. Such a condition requires the administration of substances that will bring about oxidation of the products of katabolism within the tissues themselves.<sup>3</sup> I prescribe for this purpose substances whose molecule contains oxygen atoms in somewhat unstable condition, for instance, potassium permanganate, ( $\text{KMnO}_3$ ) manganese peroxide, ( $\text{MnO}_2$ ) magnesium peroxide, ( $\text{MgO}_2$ ), etc., in fact some one of a class of substances which have been empirically prescribed for anemia and various chronic dyscrasias. Such oxidizers, upon ingestion, only act after decomposition in the stomach by an acid, and it is this increased stomach acidity which they stimulate that proves them hard to digest. Not infrequently they produce nausea. But not every neurasthenic has a sensitive stomach, and therefore where these oxidizers can be administered because well borne, they have marked alterative effect and greatly increase elimination.

According to my belief heretofore expressed, this increased elimination is brought about by producing in proper dose, a therapeutic methemoglobinemia, methemoglobin readily oxidizing inter-

mediate products of metabolism, and being itself reduced in this way to reduced hemoglobin.<sup>4</sup> It will be noted that improvement of body chemistry by medication as here set forth attempts simultaneously to retard oxidation (quinine, arsenic, phosphorus) and to stimulate oxidation by drugs of a class which readily oxidize organic substances. This seeming paradox in treatment is not inconsistent when we remember that methemoglobin does not oxidize the tissues while it readily effects this change in retrograde products of the latter, and therefore tonics which tend to check katabolism and methemoglobin producers which oxidize and prepare for elimination the products of such regressive tissue change may simultaneously act for conservation of the organism.

In reference to the next topic, *hyperesthesia and parasthesias of pelvic origin*, during the past several years it has been my custom to give every woman neurasthenic who came into my office some of those remedies which are supposed to act as a specific tonic to the female genitalia.<sup>5</sup> Many times disagreeable sensations men-

<sup>4</sup>Methemoglobins as a Factor of Conservative Metabolism, Jourl. A. M. A., Sept. 16, 1905.

<sup>5</sup>R. L. Dickinson, M. D., recently presented to the Obstetrical Society of Philadelphia the results of a study based on one hundred cases of neurasthenic women. "Chronic ovaritis, chiefly microscopic, was found in nearly all cases. Endometritis, chiefly cervical, in sixty-one cases, seldom accompanied by thickening of the endometrium. Venous engorgements were many. Certain hypertrophies of the vulva in sixty-five cases. In the bladder, congestion of the trigone in forty cases. Catarrh of rectum with congestion and atony frequent. Pelvic symptoms were prominent and lumbar pain constant. Pelvic disorder was co-incident, not causative of neurasthenia. Anatomic cure frequently failed to bring about symptomatic cure."—Jour. Amer. Med. Assn., February 10, 1906.

<sup>3</sup>The chemist, Gautier, has said: "If we weighed the respired oxygen, that mixed with the fluids drunk and in combination with the food, and on the other side, the oxygen fixed in the carbonic acid exhaled by the lungs, the skin, contained in the dejections and combined in the excreta, we find absolute equality on both sides. But the free oxygen has not been sufficient; the respired oxygen does not explain the surplus of water and carbonic acid; the oxidations, therefore, have been made with oxygen of the combinations; one-third of life is supported by oxidation without free oxygen."

Quoted by Ch. Bouchard, Autointoxication in Disease. F. A. Davis & Co., 1906.

tioned by the patient suggested pelvic congestion. In the remainder of the cases I felt such congestion might exist, although over-shadowed at the time by paraesthesias not directly traceable to hyperaesthetic genital or urinary organs. In the use of so-called uterine tonics I found no cure-all for neurasthenia but marked reduction of general hyperesthesia was noted in many instances. I then asked myself, why not use the same remedies for neurasthenia in the male? If these tonics really have the selective action accredited to them, is it not consistent to believe that they must also be of service in hyperaesthetic conditions of the male genital and urinary organs which have common origin with those of the female in the embryonic Wolffian bodies? Therefore during the past year I have often prescribed the same class of remedies for neurasthenia in men, being careful to dispense the drug myself so as to save the patient a possible embarrassing position. This treatment has apparently effected some good results, and I recommend it to your consideration.

To necessary tonic treatment of the *blood and the several body systems as such*, the physician will devote himself according to indication. All will agree that after active elimination has been initiated, the administration of iron presents itself as the therapeutic move next in order. My individual preference is for the Blaud pill or Merck's hemogallol. The latter is efficient, non-constipating, easily assimilated. Tincture of the chloride of iron is valuable if its astringent effect is counteracted. Strychnia and arsenic are usually associated with chalybeate medication, but I aim to eliminate the strychnia as early as possible so that the patient may not grow dependent on it. As regards arsenic, my own experience makes me use it in small dose, say 1/100 grain arsenic trioxide

three times a day, as I have not infrequently noted physiologic effect of the drug in the usual larger dose at an earlier period than general tonic treatment can be discontinued in neurasthenia.

A potent factor for evil, fermentation within the alimentary tract, will be much improved by the salts and daily enema. If necessary, bitter tonics, and also stomachic and intestinal antiseptic remedies, may be administered in addition. In not a few instances, however, belching and other gastric distress is due to reflex irritation from pelvic viscera, not to fermentation. These are the cases that have done well on alteratives aimed to correct pelvic congestion.

In reference to *improvement of the circulation*, a word may be profitably spoken of an efficient drug little used by the profession. I refer to erythrol tetranitrate. Its action in common with other nitrates causes dilatation of the peripheral vessels, and the indications for its use are the same as for nitroglycerin. But where the latter produces its maximum effect in ten minutes after administration, and but fifty per cent of maximum effect remains after one hour, the influence upon the circulation of erythrol tetranitrate is not noted for about forty minutes after it has been taken, upon which occurs a gradual rise to the maximum effect two and one-half hours after administration, followed by as long a gradual decline of stimulation. The advantage therefore of the latter drug over nitroglycerin and also over sodium nitrate (whose single dose influences the circulation no longer than glonoin), when continuous impression upon the circulation is desired, is obvious. My own experience with erythrol tetranitrate during the past three and one-half years, suggests, however, a warning regarding its use in the dosage given by Merck & Co., who place it on the market, viz., one-half to one and one-half grains. Once



only I gave a half-grain dose of erythrol tetranitrate, and that day feared an apoplexy in my patient, so great was its physiological effect. I use the drug regularly in one-fiftieth-grain doses; it is satisfactorily potent in this amount. A one-twelfth-grain dose may cause discomfort to the patient.

As to *baths*. Their employment in treatment of the ambulatory neurasthenic with aim to produce specific effect as a rule will be disappointing alike to doctor and patient. Few neurasthenics react well to the cold plunge, and even a cold sponge made a routine practice not infrequently brings in its train a neuralgia to exhausted nerves. Occasionally one sees a patient physically strong and mentally capable whose unstable nervous system is betrayed by a pronounced hypochondriasis, supported however by no objective sign. Such a patient will react to the cold bath. He will be keyed up by the latter so long as his physical condition does not deteriorate. The short hot bath and accompanying sweat—I now speak of baths taken at home and without attendance—seems to make the neurasthenic more nervous for a brief period. He often complains of a dry, drawn feeling of the skin. A warm bath deliberately prolonged under attendance, gradually cooled while the patient is in the tub and followed by a general massage, produces a grateful, quieting effect in most instances. However, this procedure will be carried out at the home with regularity and for any length of time in but the fewest cases. For this reason I do not rely on balneotherapy to produce decided therapeutic effect in ambulatory neurasthenia. I merely see to it that, as in health, requirements for cleanliness and a good hygiene are fulfilled by the patient's ablutions. Neither do I much rely upon *electricity* as a therapeutic aid for these office cases. Daily general far-

dization—probably the most efficient method of stimulation—is a tedious procedure to which few ambulatory patients will lend themselves for any length of time. On the other hand, production of *localized hyperemia* through the application of vacuum cups to the back and especially along the spine may be made without the patient disrobing completely, while it affords the latter, I believe, a sense of greater and more lasting exhilaration than the electric current.

The subject of *diet* for the ambulatory neurasthenic resolves itself into eating what agrees with the patient, yet to learn what this is requires more discrimination than most persons give this matter. Many a patient who is distressed after eating meat and potatoes will say he cannot eat meat, and never think of the real cause of the disturbance, the potatoes. No hard and fast rules can be employed, but where stomachic or intestinal fermentation need to be combatted I instruct the patient to eat a mixed diet of plain, coarse foods. He may eat soups, meat, fish (always avoiding fat in these), and eggs in moderation; also such vegetables as agree with him, but not too many at one time. The patient had best eat the legumina in great moderation, avoid potatoes, and often will need to eliminate heavy vegetables, such as raw onions, cabbage, cucumbers, green corn, etc. The patient must take little of sweets, not much salt, and little fat in any form except fresh butter. Acid fruits as a rule must be avoided, although I am sure that often it is the indigestible fruit pulp which makes the trouble. In many cases the patient had better eat no raw fruit, but take the latter as sauces or compotes. He must eat well-baked bread, must avoid hot breads, cakes, and rich crusts in any form. He may drink water, tea, and coffee, the latter not too strong. He must avoid chocolate and cocoa and

usually all alcoholic drinks. Malt liquors must be especially interdicted. Milk is in a class by itself; if well digested much dependence for nourishment may be placed on it. As a rule, with a mixed diet it can be drunk in only moderate quantities, if at all. Those cases of neurasthenia in which it is necessary to put the patient on an exclusive milk diet do not belong to the ambulatory class of this disease.

I must say something of *insomnia*, because the symptom means much to the patient. To the doctor it must prove the greatest bugbear of all, if he treats sleeplessness as a thing apart from constant aim to improve physiological conditions. Unless he have success in the last, the whole list of hypnotics will avail little. Single or several doses of sleeping potions are distinctly indicated where there is demand for immediate sleep to start the patient on the road of recuperation, and the physician will make his choice from many which are available. But where causes of neurasthenia remain untouched the continued use of soporifics, in that they are harmful to nutrition, aggravates the condition. The same statement is especially applicable to the bromides, which are used to allay irritative conditions associated with nervous exhaustion. Their chief effect is to diminish a general hyperesthesia, and they are therefore indicated in acute neurasthenia. The continued administration of the bromides in chronic cases is bad practice.

It may be noted that nothing has been said of hypnotism for the cure of neurasthenia. I do not voluntarily use this agent. Possibly I am influenced by lack of skill in this art, yet I recall the position taken by an eminent clinician and proficient master of this practice as a therapeutic aid. Krafft-Ebing often took occasion to say to his pupils that he placed little reliance upon hypnotism in his work, and that he confined its occasional em-

ployment to procure sleep for excited patients who did not react well to soporific drugs. Some mental suggestion is inevitably born of the physician's own confidence that probably he can enhance the patient's well-being, and to my mind the good effect of such optimism upon the patient is greater because expectation on the part of the latter is kept within reasonable bounds.

Lastly, I wish to say that in the treatment of neurasthenia I eschew the use of opium in any of its forms and at all times. I am aware that the use of narcotics for these cases is advocated and practiced by some men of experience. But no statement of authority can change my conviction that the administration of narcotics in nervous exhaustion is pernicious practice. It has come within my own experience to note a neurasthenia aggravated by an attempt to diminish the patient's dose of opium at a time when the attending physician realized a further continuance of this drug was not safe. Because opiates lock up the body secretions, its use in neurasthenia is unscientific, in that it opposes a most important principle of treatment, viz., elimination. Of equal moment, however, is the fact that unless a practitioner is willing to assume the responsibility of probably complicating nervous exhaustion by some form of the opium habit he cannot place narcotic drugs in the hands of his neurasthenic patient—an individual already hypochondriacal, easily influenced, morally weakened.

#### Discussion.

Dr. Stover: I am far from being a neurologist, Mr. Chairman, but I have been a practitioner of medicine. There have been some things said in this session of the State Society, the influence of which is well counteracted by such a paper as that of Dr. Oettinger. For instance, a visitor has given us the impression that with cases of this sort, there is nothing the matter. Following the tendency and inborn



inclination of those who live and have their being in the peculiar intellectual environments from which this gentleman comes, I think he has become imbued with certain of these occult ideas which prevail in this portion of our intellectual centers, and that these ideas have been carried too far. As regards some nervous and mental diseases, apparently of functional origin, but which seem to the careful observer to be real diseases and due to actual physical conditions of the system—I think in a paper such as this, where it indicates the physical conditions and indicates so clearly the remedies—we have something very beneficial in counteracting any wave of “new thought” that may have been introduced in our methods.

Dr. Saling Simon: Dr. Stover has voiced practically what I was going to say. I feel much like he does, but I think we are here to hear both sides. I think the paper of Dr. Oettinger and doctors of the kind we heard yesterday, serve a purpose. They give us an opportunity to think on both sides. I believe that when we finally come to the practice, we find a happy medium and generally find our level, and I feel that I cannot endorse all that Dr. Oettinger has said in regard to the medical treatment of his past cases, and yet in actual practice we are often called upon to treat this class of cases, that to simply treat any of them with conversation, as was suggested yesterday, would hardly redound to our credit.

I was very much pleased to hear Dr. Oettinger's paper. I enjoyed it very much.

Dr. Oettinger: Just a word as to that form of psychic treatment which we hear so much of now, in which the doctor endeavors to talk the patient out of his illness, talk him out of the unreasonableness of his symptoms. I am satisfied that a number of physicians present today have used this same method many times and if their patients were sufficiently intelligent, the treatment would be in a very limited number of cases, a success. Lewellys Barker, to whom Dr. Cabot referred yesterday, just recently has reported in the American Journal of the Medical Sciences, a number of cases of functional disease which were treated by complete isolation, and by the assurance on the part of the doctor and nurse that he or she would soon be well, but Dr. Barker at the same time took occasion to remark that he reported at the American Congress of Physicians a number of cases which were distinctly not successful in the outcome by this same

treatment. We all know of the most amazing effects of faith cures, at miraculous shrines, and by other agencies of that sort, because here the patient has the idea that the healing power is unlimited. Recognizing this fact myself, I have sent a number of patients to the Christian Science Church as a last resort, and behold, in a few cases, this suggestion in itself proved a most potent agency! Some day the relation between the mental and physical basis of neurons and life itself will be known, but until that day comes the worker of an occasional miracle and the physician will tread different paths to truth.

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### *BRADYCARDIA IN APPENDICITIS.*

By MAURICE KAHN, M. D., Leadville, Colo.

A careful search of the literature at my command has failed to reveal any mention of bradycardia in appendicitis; the nearest approach thereto being the statement that the pulse and temperature are not to be relied on to too great a degree, as they both are at times capricious, even rarely being normal in the presence of a virulent condition. It is generally acknowledged that the symptoms of gangrenous appendicitis may be latent and exceedingly deceptive, and every surgeon realizes that early recognition and prompt interference is our only harbor of safety in this malignant form of appendicitis; and conversely, that danger reposes on the rocks of tardy enlightenment and delayed operation, which has wrecked many surgical mariners, and still continues to augment our mortality rate in this disease. Hence the great importance attaching to any new symptom which may project further light on a given case prior to the development of general peritonitis or prior to operation.

If further observation should prove this symptom to be a reliable one, its importance would be difficult to over-estimate, for in my series of cases it ap-



peared, if not at the incipency of the disease, yet early, at a time when knowledge of the pathology of the condition is most pertinent and most difficult to obtain; and especially so in this type of appendicitis, wherein the formation of prethecative adhesions is the most improbable. That it is reliable in some cases cannot be questioned; and how frequently it occurs becomes of interest, but the cases observed since the symptom was first noted are too few to make percentage estimate of value. To be sure we all see cases of appendicitis with tachycardia, which, on operation manifest a gangrenous condition; this is usual. But I do not recall encountering bradycardia in a case of appendicitis that did not present gangrene.

In the last six cases of gangrenous appendicitis in which this symptom was evidenced, the diagnosis of the gangrenous state was made before operation, based on the bradycardia alone. So it would appear from this, that given a case presenting other unmistakable signs of appendicitis, with a subnormal pulse, the tentative diagnosis of gangrene may, with some reason be maintained. Though I should here caution the hasty to ascertain, if possible, the normal pulse for the individual in hand; for a bradycardia may be marked, and yet that slow pulse may be normal for a given patient. And if this individual characteristic does exist, the better class of patients are often cognizant of the fact.

The cause of this symptom in appendicitis is probably to be ascribed to the absorption of a ptomaine, or ptomaines, into the system, which, during circulation, act on the cardiac centers or ganglia; as is not infrequently seen in jaundice, chronic digestive disturbances, etc.; but is not akin to the slow pulse observed during convalescence from some of the acute

fevers, wherein it is likely evidence of impaired reactive power, a result of inanition.

To avoid superfluous verbiage, but two cases are briefly abstracted from my records. Case I is interesting in revealing a definite diminution of the pulse rate after the presumable development of the condition causing gangrene.

Case I: Male, age 33. Seen the evening of August 2nd. Past history negative. Present illness began last evening with pain in the abdomen, not localized. Now localized at the umbilicus. Slight increased frequency of micturition. Examination: Slight tenderness in right fossa; temperature, 98.4; pulse, 76. August 4th: No pain if patient remains quiet, but tenderness still remains as on the 2d. No chill nor sweating. Bowels regular; temperature, 98.4; pulse, 64. Operation: Usual gridiron incision. Appendix constricted at junction of middle with distal third by adhesions. Gangrenous swollen beyond the point of constriction. Removal. Purse-string suture of stump. Abdomen closed. Recovery uneventful.

The chief interest in this case is to be found in the drop in pulse rate which may be explained as follows: The mild adhesive inflammation was not sufficient to cause any marked trouble beyond moderate pain and tenderness, until the contracting adhesions constricted the appendix sufficiently to induce necrosis, when, as a result of the absorption of ptomaine so produced, the pulse lowered, which, with the diagnosis of mild appendicitis made three days earlier, the assumption that gangrene had supervened seemed justified.

Case II. Male, age 29. Unusually well developed. He was seen at 8 p. m. September 9th. Previous history unim-

portant. Present illness began yesterday at 3 p. m. He first noticed slight pain in abdomen, since which time it has been increasing in severity, until now it is almost unbearable. Bowels regular. Micturition slightly more frequent than usual to-day. Examination: Tenderness over entire abdomen, greatest in right lower quadrant, particularly at McBurney's point; temperature, 98.2; pulse, 60. Operation advised but consent not obtained until the following evening, during which interval food was withheld and an ice bag applied, which promptly relieved pain. The operation disclosed the expected gangrenous appendix, which, with a portion of the coecum was black and very friable. Gangrenous area removed. Abdomen closed as usual after careful sponging. Recovery uneventful.

This case merely illustrates the typical case exhibiting bradycardia as a symptom of gangrenous appendicitis.

#### Discussion.

Dr. R. W. Corwin: I wish to thank Dr. Maurice Kahn for a copy of his able paper, which enabled me to review it thoroughly and conservatively. Whether we agree or disagree with the doctor, we are to be congratulated for a thoughtful paper and he to be credited with keen perception and thorough examination of his cases.

In General Medicine, Practical Medicine Series, Billings and Salisbury, 1906, we find Bradycardia mentioned in connection with icterus, and the article closes with this interesting statement: "The constancy of Bradycardia in certain forms of icterus (catarrhal) and its absence in other forms (icterus caused by obstruction) are useful to recognize clinically, as much from a semiologic point of view as in certain cases to support the indications for operation."

I have been unable to find any reference of Bradycardia to appendicitis. Kelly says, referring to pulse in appendicitis:

"A slow pulse of poor quality may also indicate impending dissolution. A good pulse, on the other hand, may exist in the presence of a false infection, and by itself can never be

relied upon as a guide to prognosis or diagnosis." Kelly: page 305.

"If a pulse which has been but little accelerated begins to go up steadily in the presence of other signs of disease, a speedy operation is indicated." Kelly: page 499.

We see that an operation is indicated when the pulse goes up as well as down.

Bradycardia or Brachycardia. Causes:

1—Stimulation of the inhibitory branch of 10th; 2—Stimulation of the cerebral origin of 10th; 3—Deficient nourishment of heart muscle; 4—Obstruction of coronary artery; 5—Stimulation of 10th by disease of stomach, intestine or peritoneum; 6—Certain poisons as Digitalis.

Prof. Riegel, in 1890, published an article on "Retardation of the Pulse." He claimed anything below 60 was Bradycardia.

In last seven years, examined 4,484 men, 3,083 women; total, 7,567. Found below 60, 710 men, 331 women; total, 1,041.

He divided Bradycardia into

I. That occurring under physiological conditions—

1—Puerperal Bradycardia. Pulse dropping from 60—34 in one case. 2—From hunger—proven by fasting people. 3—Individual peculiarities.

II. Pathological Bradycardia—which interests to-day—

1. Bradycardia in convalescence from acute febrile diseases. Observed in: Pneumonia, recurrent typhoid and intermittent fever, articular rheumatism, febricula and influenza, diphtheritis, scarlatina, morbilli, variola, erysipelas.

Especially apt to occur in the face of temperature of antipyretics or digitalis have been employed.

Especially apt to occur in young and strong individuals.

May occur at a crisis; it lasts a variable time, no rule; evidence of exhaustion.

2—Bradycardia in diseases of the digestive organ. Those in which it occurs most frequently being: Ulcers, carcinoma, ventriculi, simple gastrectasia, gastric catarrh, chronic dyspepsia, catarrhal icterus, diseases of the liver, diseases of the oral cavity and throat, dyspepsia (down to 34).

3—Bradycardia in diseases of the respiratory organs.

4—Bradycardia in diseases of the circulation.

5—Bradycardia in the diseases of the urinary organs.

6—Bradycardia resulting from intoxication: Alcohol, lead poisoning, strong coffee, tobacco.

7—Bradycardia in diseases of the blood and in general disturbances of nutrition.

8—Bradycardia in diseases of the nervous system.

9—Bradycardia in other affections: Sun-stroke, skin diseases, painful affections of the muscles, diseases of the sexual system.

You see Riegel found Bradycardia in almost every form of disease.

In conclusion—if it can be proven, as Dr. Kahn suggests, that Bradycardia occurs always in connection with gangrenous or saprophytic appendicitis, and never in the pyogenic variety of appendicitis, and tell us when we must operate promptly, and when we may consult the patient's convenience, as well as our own pleasure, Dr. Kahn will have made a name, and surgery gained another victory.

I wish for surgery, as well as for Dr. Kahn, that this may come true. As yet, I feel we are not ready to make a positive declaration. An examination of our hospital files does not encourage me. Both classes seem to show high and low pulses. We must have further evidence. We must know the patient's normal pulse. I know one person whose pulse in health is 37—5959 would be a rapid pulse for her, yet it would be classed with Bradycardial pulse.

We cannot judge always from appearances. Most of you know Dr. Hall and Dr. Work. Naturally you would say Dr. Hall has a quick pulse and Dr. Work a slow pulse. Dr. Hall's normal pulse is 60, and Dr. Work's is 80.

I would suggest that Dr. Kahn continue his interesting investigation, and all the rest of us aid him.

The subject is timely, and worthy of our most careful consideration.

Involuntary urination very often means a distended bladder, and in old men it should at once indicate an examination into the condition of the prostate. Vomiting, too, is often caused by distension of the bladder.—*Journ. Mich. State Society.*

# Progress of Medicine

## INTERNAL MEDICINE.

EDITED BY

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William J. Baird, M. D.,

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## QUININE IN INFLUENZA.

Broadbent (*London Practitioner*, Jan., '07,) gives, during a prevailing epidemic of Influenza, two (2) grains of the sulphate of quinine each morning as a prophylactic, and during the attack one (1) drachm of ammoniated quinine with two (2) drachms of liquor ammonii acetatis every hour for three doses, and every four hours till relieved.

In the fulminating attacks with coma, he states that he completely relieves them by large doses of the hydrobromate of quinine hypodermically.

He considers quinine the most effectual therapeutic agent we have in this disease.

O. M. G.

## ORAL ADMINISTRATION OF ANTITOXIN.

McClintock and King (*Jour. Infec. Dis.*, Oct. 30th, 1906,) experimented both upon animals and man as to the relative effects of antitoxin by mouth and subcutaneously.

They conclude that, while it is far less reliable given by mouth, it is by no means inert, as has been claimed—especially if given on an empty stomach and no food taken for several hours afterward, also that its action is much enhanced if there is administered with or just preceding it, salol, trikresal, chloroform, opium, or some other drug which retards digestion.

O. M. G.

## DIPHTHERIA TOXON PARALYSIS.

Paul A. Lewis (*Journal Medical Research*, Dec., '06,) contributes the results of a study of all the guinea pigs used for



test purposes by the antitoxin laboratory of the Massachusetts State Board of Health, with reference to paralysis.

He cites Ehrlich's conclusion to the effect that diphtheria toxin consists not of a single substance, as has been previously assumed, but a mixture of several distinct poisons, more or less closely related in their origin, disease producing power and affinity for antitoxin. The paralytic phenomena, he concludes, are due to a specific principle which he has named "Toxon." The haptophore groups are the same as in true toxin, and the main difference lies in the toxophore groups, and that it possesses a lower affinity for antitoxin, therefore more difficult to saturate. The proportion of toxon to true toxin may vary from 0 to 300 per cent. The toxon never kills acutely, even in high doses, but causes paralysis in from 14 to 28 days, which is never permanent, but may be fatal from cardiac paralysis.

Lewis divided his animals into three classes: (a) Those which received toxin alone and survived, of these the paralyzes were very few; (b) those which received ten minimum fatal doses of toxin but sufficient antitoxin to save the life—in these there was a much larger percentage of paralysis; (c) those that received 100 minimum fatal doses and sufficient antitoxin to save life; of these over 30 per cent developed paralysis.

The conclusion seems plain: Assuming a fairly definite ratio to exist between the Toxin and the Toxon. The amount of toxon (paralysis producing principle) in the small amount of crude toxin given in group "a" was seldom sufficient to produce paralysis; in group "b", ten times as much crude toxin was given, but the "true toxin" was neutralized by antitoxin while the *toxon* was only partially neutralized on account of its lesser affinity for antitoxin. While in group "c"—one hundred times as much being given as in "a"—it was still more difficult to satu-

rate the toxon—hence the greater number of cases of paralysis.

In practice this probably depends, not so much upon the amount of toxin, as the ratio of toxon. The higher the ratio of toxon the larger amount of antitoxin is necessary for its saturation. O. M. G.

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#### THE TREATMENT OF STOMACH AND INTESTINAL HEMORRHAGES WITH LIQUID GELATINE.

From October 1st, 1905, to October 1st, 1906, Mann treated all his patients with stomach and intestinal bleeding with liquid gelatine, following the formula of Erich Kohn—*Therapie der Gegenwart*, 1905—Acid Citric 2.00; Syrup auranti Cortex 20.00; liquid gelatine ad 200.00. One tablespoonful every two hours, no other drugs were given. Nine patients—Stomach ulcer, Typhoid, Carcinoma—were so treated, and the results warrant publication and further trial of the remedy.

W. J. B.

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#### THE EARLY DIAGNOSIS OF TUBERCULOSIS.

Arthur Mann (*Munch. Medic. Wochenschr.*, No. I, 1907.) From an examination of two hundred and fifty patients, Barot draws the following conclusions:

First, Diagnosis of tuberculous infection of the glands is possible during the so called first stage, or before involvement of the lungs.

Second, The diagnosis is warranted when there is emaciation, early morning fatigue, tenderness on pressure over vertebræ and sterum and abnormal resonance of the deep voice over the vertebræ.

Third, Glandular tuberculosis is very much more common than is generally recognized, many ill-defined unclassified, diseased conditions are due to tuberculous infection of the glands.

Fourth, It is during this stage of tuberculous infection that there is most hope of help from diet and therapy.

Fifth, The systematic examination of

all patients with reference to tuberculous infection of the glands would greatly aid in the effort to stamp out tuberculosis. Paris Academie de Medicine, Dec. 18, 1906—*Munch. Mediz. Wochenschr.*, No. 5, 1907.

W. J. B.

**SURGERY.**

EDITED BY

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**SEQUESTRATION ANEMIA IN BRAIN AND SKULL SURGERY.**

By sequestration anemia, the writer means an artificial anemia produced by application of a tourniquet to some part or parts of the body remote from the field of operation; in operations upon the head and neck, for instance, a tourniquet is applied to the lower extremities producing a considerable degree of passive hyperemia, with consequent anemia of the head and neck; in this way a great deal of blood is withdrawn from the general circulation temporarily, the amount being regulated according to the needs of each individual case and having due regard to the character of the pulse.

The difficulties of brain and skull surgery, due to extensive venous bleeding, are by this method rendered almost *nil*; a practically dry operating field allows of more thorough and extensive work and the time of operating is greatly shortened. Employing this method the author's experience refutes the *a priori* theory that diminution of the blood supply to the head, trunk and upper extremities by this procedure is either dangerous to heart action or more conducive to shock. The heart action is lessened, it is true, and the blood pressure is lowered, but the pressure of the cording or tourniquet can be so readily modified that the heart action is easily controlled. The author has found that the danger of shock is diminished rather than increased, attributing this effect to diminution in the amount of blood lost, conservation of vital heat, and shortened time of operation. Another factor of great

importance and one which strongly commends sequestration anemia in brain surgery is that thereby, the amount of anesthetic employed is ridiculously small, many cases requiring little or none of the anesthetic for the continuation of the operation after the first complete surgical narcosis is produced. Another advantage of this method is the lessening of the danger of sudden death from paralysis of the respiratory center, so frequent in operations for intracranial tumor; this danger is rendered of little moment by sequestration anemia which effectually lowers the intracranial pressure. The danger of subsequent secondary hemorrhage is obviated by the simple procedure of applying gauze sponges, wrung dry out of boiling water, to the operative field.

Seven cases have been operated upon satisfactorily with this method: excision of cerebellar tumor, trephining for extradural hemorrhage (2 cases), trephining for cerebral cicatrix with dural adhesions, excision of foot center in cortex for relief of Jacksonian epilepsy, and excision of hand-center in cortex for relief of Jacksonian epilepsy.

Among contra indications to the use of sequestration anemia in brain surgery, are increased coagulability of the blood, atheroma, and slowing of the blood current.—Robert H. M. Dawbarn, *Annals of Surgery*, February, 1907.

**GYNECOLOGY AND ABDOMINAL SURGERY.**

EDITED BY

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W. J. Mayo in a recent number of the *Canada Lancet*, states that four out of five of all tumors of the breast at any age are malignant and that one-half of the balance will become malignant.

**EXPERIMENTS ON THE COAGULATION OF MENSTRUAL BLOOD.**

We are told, in a recent article by Birnbaum and Osten (*Archiv. f. gyn.*) on the

above subject, that the alkaline uterine secretion does not hinder the coagulation of the menstrual blood. On the other hand they show by experiments that by mixing alkaline mucous and a fluid containing a fibrin producing substance that the mucous does not prevent coagulation, but rather accelerates it. The fluidity of the blood may be the result of destruction of the ferment, of the large amount of alkaline salts in solution, or of the existence of antibodies. At present which of these causes is operative cannot be determined.

#### SULPHATE OF SPARTEIN IN SURGICAL PRACTICE.

Under the above title in the *American Journal Surgery*, February, 1907, Dr. Stuart McQuire reports briefly his experience with Sulphate of Spartein, especially in cases of post-operative suppression of urine. In previous cases he had used the customary treatment of water by mouth under the skin and rectum, hot packs and vapor baths, cups and counter irritants; strychnia, digitalis and nitroglycerin; calomel and saline purgatives; and one case stripping the kidney capsules, with uniformly bad results.

Since beginning the use of Spartein he reports six cases in which the drug, he believes, was the means of saving the patient's life. Its physiological action is to increase the blood pressure, make the pulse slower and stronger, and it is a powerful diuretic. He administers it hypodermically in doses of from one to two grains, repeated every three to six hours. Its action is manifest in thirty minutes after administration and lasts from four to six hours. When so employed he has repeatedly "seen it pull up a running heart and set in action a pair of stalled kidneys." He recommends that its use should not be delayed until suppression of urine is in existence, but it should be given as a prophylactic as well as a curative agent.

C. K. F.

#### NERVOUS AND MENTAL DISEASES.

EDITED BY

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#### CERVICAL RIBS.

Keen (*Amer. Jour. Med. Sciences*, Vol. CXXXIII, No. 2,) discusses comprehensively the symptomatology, diagnosis and surgical treatment of cervical ribs. His own operative case was as follows: Mrs. M. A. R., aged 63 years. Had ordinary diseases of childhood, with good recoveries. General health good, except several attacks rheumatic fever. At 17 noticed a lump above left clavicle. It caused no trouble until February last, when once on rising she noticed a sharp tingling pain in first and second fingers of the left hand. They were paler and colder than her other fingers. Symptoms disappeared on friction, but some days later pain returned with involvement of thumb and hypothenar eminence. Some days later she had pain on the ulnar side of forearm, then the radial side became involved, and subsequently pain radiated to the shoulder. Symptoms improved in June, but returned again in September, when the soft parts at tips of the fingers, especially about the nail, became gangrenous. Working the hand freely lessened the pain.

Physical examination: Absence of pulse in axillary, brachial, radial, and ulnar arteries. Left sub-clavian can be felt above left clavicle running downward and outward to clavicle for distance of 6 c. m. It pulsates strongly—no thrill but stethoscope applied over artery reveals a local bruit, which is not propagated. Behind the artery is a rounded swelling above left clavicle, a little internal to the junction of its middle and outer thirds. On deep palpation this swelling is found to be part of a hard, bony mass, which can be traced backward to the spinal column. As



it curves forward it seems to pass behind the clavicle. The artery passes in front of (that is over) this bony prominence, which was diagnosed a cervical rib. Behind the right sub-clavian artery also a cervical rib is present, and can be traced back to the spine. Both cervical ribs are immobile. Diagnosis was confirmed by skiograph. The left rib was removed by operation, after which all pain disappeared from the left arm. The pulse did not return in any of the arteries below the sub-clavian, yet within 24 hours the left hand assumed a better color. The ulcerated spots dried up and crusted over. Eleven months after operation slight pulsation in axillary and ulnar arteries, none in radial. Slight pain in forearm if patient works much but she uses her hand for all kinds of work, which feels as strong as the right one. Necessity for diagnostic confirmation by Roentgen ray was demonstrated in two cases of supposed cervical rib. In the first case Keen thought he could trace a cervical rib on both sides back to the spinal column. There was no pulse in the axilla, arm and forearm. Re-examination showed a hard supraclavicular tumor on the left side, and a smaller one on the right. An X-ray picture showed no cervical rib, but the first dorsal rib was placed higher than is usual. In the second case a telegraph operator, aged 21 years, noticed an enlargement on the left side of base of the neck eight years previously, but no symptoms supervened until the last four months. There was numbness of the left arm. Palpation revealed a hard, immovable mass behind and below the sub-clavian artery, which pulsated immediately beneath the skin. The mass could be traced backward to the spinal column and forward to the clavicle, behind which it was lost. No thrill, but with stethoscope a bruit could be heard over the artery. A skiograph showed an anomaly

of the first rib on both sides, but particularly on the left side. Here, instead of curving forward from the spine, it changed its direction at the articulation with the transverse process, running almost in a straight line downward and outward. On the sternum was noted a cervical projection just below the end of clavicle. This represents the point at which the first rib would have articulated had it reached the sternum. The author points out that nervous symptoms are even more frequent than the vascular, appearing for the most part as pain and perverted sensation. In a number of instances associated congenital nervous disease has been found.

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#### FRONTAL LOBE AND CEREBELLAR FUNCTION.

Mingazzini and Polimanti (*Jourl. of Mental Pathology*), as the result of researches concerning successive extirpation of one cerebellar hemisphere and one frontal lobe of the cerebrum either on the same or opposite side, conclude as follows: Since extirpation of one frontal lobe causes slight ataxic and asthenic disturbance of the anterior limb on the side opposite to that on which the operation is performed, disturbances similar to those following unilateral extirpation of the cerebellum and if extirpation of one frontal lobe on the same side on which the cerebellar hemisphere had previously been extirpated augments the ataxic disturbances that have already existed and causes them to appear, although in a minor degree on the opposite side, the conclusion seems to be that the frontal lobe has, not a direct, but an indirect action on co-ordinate movements of the limbs on the opposite side. The ataxic and asthenic symptoms that we have observed under the various conditions differed only in degree from those caused by

cerebellar ablation. Everything points to the fact that each frontal lobe has an influence on co-ordination of movements of the limbs on the opposite side, and particularly on the anterior limb.

Some authors interpret the ataxic symptoms that follow ablation of the frontal lobe as an effect *a distance* on the cerebellar hemisphere on the corresponding side. This does not seem to us to be correct, because then only the limbs on the same side should present ataxic disturbances, whether the frontal ablation preceded or followed the cerebellar ablation. Besides, the disturbances should then be only transitory. But frontal ablation after cerebellar extirpation on the opposite side causes aggravation of the ataxic symptoms (inco-ordination) on the opposite side (the same side on which the disturbances had been caused by cerebellar ablation); similarly, frontal ablation on the same side on which cerebellar ablation has existed, causes bilateral symptoms similar to those caused by complete cerebellar ablation.

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#### OPHTHALMOLOGY.

EDITED BY

E. W. Stevens, M. D.,  
Denver, Colorado.

#### THE PREVENTION OF OPHTHALMIA OF THE NEWLY BORN.

Under the heading "What Means Does the Modern Obstetrician Employ to Prevent Ophthalmia of the Newly Born," J. Clifton Edgar (*Medical News*, Sept. 23, 1906,) discusses the subject from the standpoint of the obstetrician.

He points out that there are two means at command for reducing in frequency, if not practically preventing ophthalmia neonatorum. These are: first, the ante-partum preparation of the maternal passages in cases in which they are suspected of infection; second, the dropping into

each conjunctival sac immediately after delivery of some antiseptic as nitrate of silver, protargol or argyrol.

When the maternal passages are suspected, a preliminary course of treatment of the vagina should be instituted, beginning about two weeks before delivery. This should consist in daily or twice daily vaginal douching, first with a mild alkaline solution, and then with one of bichloride of mercury in strength 1/5000. Just before delivery something must be done to provide a substitute for the normal lubricating mucus, which will have been washed away by the douching process, and a one per cent. lysol solution will be found useful for this purpose. The vagina may be washed out with it when labor begins.

The vaginal mucus has no bactericidal action against the gonococcus. There is abundant evidence from many sources to prove that the fetus is in certain cases infected with the gonococcus *in utero*, and hence born with gonococcus infection of the conjunctiva. Thus no prophylaxis, either in the nature of ante-partum vaginal cleansing or post-partum installations into the conjunctival sac of antiseptics can, in a small percentage, avail anything. In private practice the author is not accustomed to use ante-partum cleansing—a concession to the popular belief that there is less gonococcus infection in private practice, and yet every now and then he sees gonococcus infection in spite of Crede's nitrate of silver prevention.

In both hospital and private cases use is made of Crede's method without exception. As soon as the child is born its face is carefully washed with boric acid solution, separate wipes being used for each eye, and the lids rubbed from the nose outward in each case. Then, whether infection is suspected or not, two drops of a 2 per cent. solution of silver

nitrate (10 grains to one ounce) are dropped into each conjunctival sac.

After repeated experiments in hospital practice with argyrol and protargol they have been abandoned as not equal in efficiency to the nitrate of silver treatment.

The author's faith in the prophylactic power of Crede's method is so strong that he attributes all failures to ante-partum infection of the eyes to unskilled application or improper or inert solutions.

There is a grave doubt in the minds of many physicians whether the newer silver salts, particularly protargol and argyrol, may with safety replace silver nitrate used in accordance with Crede's method. Very different results have been obtained by different observers. Unfavorable reports from the use of protargol and argyrol have, however, been numerous during the past year, and many physicians have abandoned the use of these preparations as uncertain and vastly inferior to nitrate of silver.

As the classical 2 per cent. of Crede's occasionally causes silver catarrh, and 1 per cent. rarely does so, many obstetricians use the 1 per cent. solution. In the hands of students, midwives and other inexperienced persons, the 1 per cent. is safer.

#### EAR, NOSE AND THROAT.

EDITED BY

Wm. C. Bane, M. D.,

Professor of Otology, Denver and Gross College of Medicine.

C. E. Cooper, M. D.,

Denver, Colorado.

#### THE RELATION OF SYSTEMIC DISEASES TO OTITIS MEDIA PURULENTA AND ITS COMPLICATIONS.

J. J. Thompson (*Laryngoscope*, Aug., 1906,) refers to the frequent necessity of excluding systemic conditions in arriving at a diagnosis of intracranial disease, especially in children, and emphasizes the

importance of examination of the ears. The most frequent diseases to be excluded are typhoid fever, malaria, cerebro-spinal meningitis, pneumonia, tubercular meningitis, uremic or diabetic coma, and the early stages of some of the exanthemata. He urges the need of careful study of the temperature and pulse, the differential blood count and the examination of the cerebro-spinal fluid in complicated cases of otitis media.

To illustrate the difficulty of differentiating between typhoid, of meningeal type, and meningitis following operation for chronic suppurative otitis media, Dr. Thompson cites a case. Healing of the mastoid wound was imperfect. Three months later patient developed violent headache, chilliness and vomiting. The temperature after eight hours ranged from 99° to 105° F., pulse, 130. Meningitis was suspected and possibly a tempero-sphenoidal abscess. No change in 24 hours. Reflexes and eyes normal. Kernig's and Babinski's signs were absent. After consultation, the dura was exposed and the brain explored without revealing the cause of the condition. Blood examination revealed a leucocyte count of 4,600 and low percentage of poly-morphonuclear cells. Typhoid was suspected, yet a Widal test was negative and other symptoms absent. The mind remained clear and the pulse rate and the leucocyte count were against meningitis. Three days later the typical rash and splenic enlargement were present, also the diazo and Widal tests were positive. The case then went the ordinary typhoid course and recovered. Another case following simple mastoid operation lapsed into a typhoidal condition in a few days. Moderate temperature, slight headache, apathy, slight abdominal rash, not typical of typhoid, little mastoid involvement was found, hence the case was regarded as typhoid. Patient died a few days later,



and autopsy revealed marked and extensive basilar meningitis.

Commencing pneumonia and bronchopneumonia in young children is sometimes difficult to differentiate, the first day or two, from acute otitis media, unless there are marked evidences of pain in the ear. Elevated temperature and increased pulse rate exist in both. Malaise and slight cough in each will indicate lung involvement when the disease is mostly in the ear. Leucocytes and polymorphonuclear cells increased in both affections. Incision of an inflamed, bulging drum-head will clear up the diagnosis by diminution of the symptoms, while in pneumonia the physical signs become more apparent. Both diseases may exist at the same time, the infection being produced by the pneumococcus. A pneumonia may follow the anesthetic administered for mastoid operation. Malaria may be diagnosed and the patient treated for its eradication when the real cause of the chills, elevated temperature and sweats, may be due to lateral sinus involvement from chronic ear disease. Dr. Thompson cites such a case in which care had not been observed in the study of the patient until seen by the aurist.

Cerebro-spinal meningitis, and the exanthemata, developing in cases of otorrhea complicate the diagnosis. Two cases were reported. A child with sudden stopping of the discharge developed occipital headache, vomiting and drowsiness. Pulse 115. Ear canal dry and a large perforation in the drumhead. No mastoid or jugular tenderness. After about 24 hours a rigidity of cervical, spinal and limb muscles developed. Cerebro-spinal fluid indicated pressure and contained diplococcus meningitides. Large doses of antitoxine, at intervals of two or three days, ameliorated the symptoms and recovery took place in four weeks. The

other case, a boy of 8 years, had inflammation of the right ear, followed by discharge. In the third week he developed pain in the right side of the head. Temperature rose to 100° F. No cough. Tongue heavily coated. Painful expression in the face. Small amount of pus discharged through perforation in the drum-head. Slight tenderness of mastoid tip. Discharge contained extracellular diplococci. Drum-head was incised freely. Temperature suddenly rose at 8 p. m. to 104.5°, pulse, 122; respiration, 24. Blood count, 31,280 leucocytes, with 4,455,360 red cells. Trace of albumen. Later in the same day, temperature 105° F.; pulse, 129; respiration, 44. Delirium developed. Mastoid opened, but nothing abnormal found. After operation, the temperature, 101° F. at 4 p. m. the next day, but the general condition not improved. Kernig's sign present, and considerable muscular rigidity with some retraction of the head. Temperature 104° to 105° F. for the next two days. Spinal fluid contained extracellular diplococci. Child died on the tenth day after admission to the hospital. Autopsy. Turbid grayish cerebro-spinal fluid under tension. Arachnoid thickened and covered with thick exudate. Base of brain, pons and medulla the seat of diffuse septic pachy-meningitis.

"Tubercular meningitis often complicates otitis of the same nature." Diagnosis is difficult. Operative procedure is likely to hasten death.

Uremic coma may simulate cerebral or cerebellar abscess. Sudden unconsciousness in a patient with purulent ear disease may present symptoms of both diseases. There may be but slight amount of albumen and but few casts, making diagnosis difficult. Sleeplessness, vomiting, slight increase of temperature, muscular twitching, may indicate

either condition. Retinitis indicates uremia, while choked discs point to intracranial involvement. Differential blood count is a valuable guide in coma, there being an increase of the leucocytes and a high percentage of the polymorphonuclear variety.

Intracranial suppuration often gives few indications of its presence beyond possibly a headache. Continuous headache, in cases of chronic aural discharge, especially if there is defective memory or easily induced mental fatigue, is suggestive of brain abscess. Two cases in illustration are cited. The first was operated, and a large temporo-sphenoidal abscess opened. The second had headache, optic neuritis, aphasia and other symptoms of frontal abscess. He recovered mental vigor and vision. The headache ceased. Gained weight and was feeling fine until fifteen months afterwards he suddenly became unconscious and died. Autopsy revealed frontal abscess. A frequent complication of otitis is jugular bulb thrombosis. Septic matter is absorbed and carried into the sinus. Examination of the blood for bacteria is advised in such cases.

"Nearly all cases of middle ear disease have their origin in some of the infectious fevers, particularly the exanthemata and influenza." Careful attention should be given the nose and throat, especially as adenoids are so frequently present. As a prophylactic measure the removal of adenoid vegetations from the nasopharynx is most desirable, because they are a menace to the ears in any febrile disease.

The principal conclusions are: First, the presence of otitis adds difficulties in diagnosing systemic diseases. Secondly, that bacteriological and pathological aids should be employed, and that the otologist

and general practitioner should confer more frequently than they do for a more accurate diagnosis.

BANE.

#### HEADACHE AS A SYMPTOM OF INTRANASAL DISEASE.

Stephen H. Lutz claims that until recently it was impossible to recognize deep seated troubles due to accessory sinus involvement and the appreciation of certain head pains was meager. Improved methods have rendered easier the recognition of intranasal and intracranial processes.

"Headache cannot always be distinguished from so-called neuralgia." "Tenderness on pressure of the affected nerves is the only real sign of true neuralgia." The author says there is no fixed relation between the seat of the disease and the localization of the seat of the pain, in fact, the pain is not generally at the seat of the disease, but may be, and quite frequently is upon the opposite side of the head.

In locating the disease with a probe, should it encounter a portion of the mucous membrane giving rise to the same kind of pain complained of, it is certain that the disease is in that locality. He therefore advocates thorough nasal probing and a careful search for pus foci.

The retention of pus is the most usual cause of pain as is shown by the relief accompanying free discharge. Edema, hypertrophy, irritation of erectile tissue and circulatory disturbances at the base of the brain are also factors and Grunwald believes that pain arises from pressure upon the nerve endings in the inflamed mucous membrane whether or not the products of suppuration are confined and exerting pressure.

Dizziness, especially, indicates sphenoid involvement, more rarely, frontal and

ethmoid. Nervous manifestations, insomnia, inability for mental concentration, depression, etc., occur with ethmoid and sphenoid infections and are probably due to the proximity of the suppurating process to the base of the skull. Swallowing of pus often causes stomach derangements.

The sinuses should always receive thorough examination when pain is perceived after influenza, scarlet fever and all infectious diseases.

The frontal ethmoid and maxillary sinuses are the most often involved and the pneumococcus, typhoid bacillus and streptococcus are the most common micro-organic etiological factors.

The locations of pain, often called neuralgia, and the sinus affected are as follows: "Supraorbital and supradental pain in antrum cases, infraorbital pain and pain in back of head in frontal cases, pain in the top of head and at the root of the nose in ethmoid cases, pain at the base of the skull, center of the head and in the temporal regions in sphenoid cases; mixed pain indicates multiple involvement." Supraorbital pain is usually indicative of frontal rather than maxillary sinusitis. (Dept. Ed.)

In chronic sinusitis there usually is diffuse headache, heavy feeling and more or less constant pain in the center and back part of the head. This is due to the usual multiple involvement. True ethmoid and antrum pains are usually absent in chronic cases except during acute exacerbations, and then pain recurs in the same localities as it did in the acute attack—a fact usually remembered by the patient.

Pain in the head, discharge of pus, temperature, general malaise, history of repeated cold, unaccountable sneezing, loss of smell or taste; kakosmia, post-ocular sense of pressure, or pressure in portions of the face, disturbance of vision, nasal furunculosis and pain over frontal or maxillary sinus and top and sides of nose,

all indicate sinus disease and immediate treatment.—*Brooklyn Medical Journal*, July 6, 1906. C. E. C.

## Constituent Societies

A stated meeting of the **Medical Society of the City and County of Denver**, was called to order February 5, 1907, at 8:20 p. m. by the president, Dr. W. C. Bane. The minutes of the previous meeting were read and approved. The following propositions for membership were read and referred to the Board of Censors: Drs. J. H. East, James F. Morning and Edward W. Lazell.

Dr. T. E. Carmody read a paper on **Some Methods of Treatment of Fractures of the Jaws**, showing various appliances which were of value in these conditions; of particular use was the interdental splint, made of dental modeling compound, this material being preferable to the rubber, and of special value where there was much injury; the angle apparatus of bands on upper and lower teeth fastened by wires and manipulated by jack screws; the Heath splint and the Gilmour apparatus were demonstrated with plaster models. As regards feeding when the jaws are thus wired, Dr. Carmody said there was no difficulty in giving plenty of liquid nourishment, one patient having gained eight pounds while wearing the apparatus. The various wires, forceps, pliers, etc., necessary for the proper manipulation of these various splints were also shown and their use demonstrated. Dr. L. K. Fullerton, of the Colorado College of Dental Surgery, by consent of the society, discussed Dr. Carmody's paper.

Dr. Saling Simon reported a **Case of Empyema Following Traumatism of the Mouth**.

A male child, 21 months old, fell, on October 26, the metallic end of a pencil held in the mouth penetrating the mouth with the resultant formation of an abscess which subsequently broke in the mouth. For some days the child had a fever, which was intermittent in character; when seen on November 21 the temperature was 103 degrees, pulse 126, respiration 40; examination revealed the physical signs of a broncho-pneumonia; five days later an effusion was demonstrated on the left side, aspiration showed the presence of pus, and resection and drainage were instituted. The case was noteworthy from the fact that the symptoms from the onset were apparently



those of sepsis, the temperature going to 105, respiration 60 and pulse uncountable; the traumatic etiology with resultant bronchopneumonia and empyema. Dr. Simon remarked that while thoracic effusions were apparently on the increase, the increase was more apparent than real, and was due to the fact that more careful physical examination was being generally employed. The chief signs were flatness and absence of voice sounds; he did not believe that the shape of the upper border of the areas of dullness was an indication of the amount of fluid. In this case the Thayer sign, a paravertebreal triangle of dullness, not flatness, on the side opposite the empyema was clearly demonstrated; when the patient lies on the affected side this triangular area diminishes in size or disappears entirely, thereby positively differentiating an empyema from a pneumonia. In the discussion of Dr. Simon's paper, Dr. Carmody said that this case showed the necessity of oral asepsis following trauma to the mouth. Dr. J. N. Hall stated that empyema was a condition which was frequently overlooked, especially in children, as was also pericarditis, and therefore in suspicious cases the physical examination should be very thorough.

The secretary read a communication from Dr. J. N. McCormack, chairman of the Committee on Organization of the Americal Medical Association, enclosing the unanimous report of the Committee on Insurance of the American Medical Association, wherein the Denver County Society was urged to stand with other county organizations in support of this report, which in effect demanded a uniform flat fee of five dollars for all life insurance examinations. Dr. Moleen spoke of the resolutions adopted by various county societies. Dr. J. N. Hall moved that the matter be referred to a committee of three to recommend some action to this society. The motion was carried and the chair appointed Drs. Silverstein, W. H. Davis and Carmody.

On motion the society adjourned.

Members present, 31.

A regular meeting of the **Medical Society of the City and County of Denver** was held February 19, 1907, Dr. Bane presiding.

The minutes of the previous meeting were read and approved. The Board of Censors reported favorably on the applications of Dr. James H. Morning and Dr. Edward W. Lazell, who were elected to membership.

Dr. Leonard Freeman opened the scientific

program with a paper on **The Correction of Certain Forms of Saddle Nose**. Dr. Freeman said: "The various surgical procedures in vogue for the correction of saddle nose were, (1) the method of employing bone flaps, sliding them into proper position; (2) the use of metallic or celluloid plates, and (3) the use of paraffine. The employment of bone flaps was indicated where there was great deformity and much cicatricial contraction. Paraffine was undoubtedly of value in certain conditions, for instance, where the skin was loose and no great deformity existed; however, paraffine was objectionable because it had to be injected in the liquid state and its distribution in the soft tissues was therefore necessarily difficult to control; it often would drift to the sides of the nose or the forehead, it required great rapidity in its use, tending to solidify in the needle, there was risk of embolism, and danger of sloughing of the skin from too great pressure. Plates were of use where the deformity was not too great, and the gold plate seemed to have the preference; the plate should extend from the solid bone above to the firm tissue of the end of the nose below, it should be curved convexly from side to side and must not be too thick. The usual incisions employed in inserting the metal plates were objectionable." Dr. Freeman's modus operandi consisted in a horizontal incision between the eyes, loosening the skin thoroughly with curved scissors along the proposed line of insertion of the plates, which were then inserted by the aid of a darning-needle for a guide plunged through the tip of the nose. The incision employed and the method of insertion were clearly shown by drawings. The use of the gold plate, Dr. Freeman thought, was preferable to the other methods in most cases. Discussing Dr. Freeman's paper, Dr. Waxham was of the opinion, though he had had no personal experience with the method, that the use of the gold plate should supercede all others.

Dr. Mary E. Bates delivered an address on **Scientific State Protection of Children**, illustrated with stereopticon views. Dr. Bates made a strong plea for the enlargement and improvement of our state institutions for the care of those children who were mentally, morally and physically defective or delinquent; she showed the beneficial results of state protection, the dangers of neglect, and placed the blame where it, to a great extent, rightly belongs, on the shoulders of the medical profession, which she urged to support the "Craig"

bill now pending before the state legislature. In discussion, Dr. Oettinger said the necessity for schools and institutes for the feeble-minded and mental defectives was obvious, and our institutions were lacking in capacity and accommodations. Dr. Libby then introduced the following resolution, which was unanimously adopted and the secretary requested to send a copy of same to Mr. C. F. Parker, author of the bill in the Colorado House of Representatives.

Resolutions in support of Section 129, of House Bill No. 457, by Representative C. F. Parker, Colorado General Assembly.

Whereas, The failure of parents and others having the care of children, to recognize and correct physical defects, is one of the most common causes of backwardness in school work, imperfect development, and juvenile delinquency; therefore, be it

Resolved, That this meeting heartily recommends the adoption of the section of the proposed revision of the School Laws now pending before the Colorado State Legislature, which will require the calling of the attention of parents to such defects, and the reporting of such cases to the proper authorities.

Dr. Burns then took the chair and asked the following questions of medical interest suggested by the "Thaw" case:

Mrs. Thaw made the following statement: "I sat down to a table on which there was a bottle of champagne. He asked me to drink, and I said I don't care for it. Finally I took a drink. I don't know how long it was—maybe a minute or two—I heard a rumbling in my ears. The whole room seemed to go round. Everything grew black. When I recovered I found myself in bed."

1. Admitting this to be true, what drug could produce such sudden unconsciousness and sudden recovery without great danger to life?

2. What are "knock-out drops"?

3. How do burglars produce sudden unconsciousness with chloroform?

4. Where does jealousy end and insanity begin?

5. Was Thaw in a jealous rage, or insane as the result of a jealous rage.

6. Was the murder premeditated?

7. Was White a degenerate?

8. What is a sexual degenerate?

9. How is insanity diagnosed?

10. Why do experts differ as to the sanity of an individual?

Dr. Hill said that "knock-out drops" consist-

ed of chloral. Chloroform can be administered to babies without awakening them, but he doubts if it can be to adults. Dr. Oettinger said newspaper reports were notoriously inaccurate, especially regarding technical questions, and our discussion of the Thaw case could not, therefore, be founded on fact. He thought White was probably a moral degenerate; he said that experts differed regarding the sanity of an individual because of the uncertainty of various forms of insanity and also because of individual differences in the examiner. Dr. Oettinger defined insanity, and what constituted a moral degenerate, and described the method of examining an individual as to his sanity.

Dr. Bates thought that "knock-out drops" could have been feasibly employed; she thought that Thaw had a delusion in regard to White, that he believed there was a conspiracy against him, and that he was called by Divine Providence to kill White.

On motion the society adjourned.

Members present, 57.

ALBERT SILVERSTEIN, Secretary.

A special meeting of the Medical Society of the City and County of Denver was held pursuant to call by five members, Thursday, February 28, 1907, at 8:15 p. m., Dr. Bane presiding.

At the request of the chair, Dr. Moleen stated the purpose of the meeting to be the consideration of a proposed amendment to the Pure Food bill now pending before the state legislature. Dr. Moleen read the section of the bill relating to drugs and the proposed amendment recommended by the Colorado State Pharmaceutical Association and the Denver Pharmaceutical Association. He said he believed the proposed amendment contradicted the spirit of the pending bill, and practically rendered its effectiveness nil.

Dr. Byles moved that it is the sense of this society that House Bill No. 29, known as the Pure Food Bill, be passed without amendment, that this amendment is obnoxious and that the secretary notify the members of the state legislature of this action on the part of our society. On motion of Dr. W. W. Grant, the following was substituted for Dr. Byles' motion: That the chair appoint a committee to draw up proper resolutions. Carried. The chair appointed Drs. Moleen, Byles and C. E. Cooper on this committee, which presented the following resolutions:



**Resolution Passed by the Medical Society of the City and County of Denver, in Special Session Assembled, February 28, 1907.**

Whereas, The amendment, recommended by the Colorado Pharmacal Association and the Denver Pharmaceutical Association, to House Bill No. 29, by Mr. Kelly, otherwise known as the Pure Food Bill, is contradictory to both the spirit and the letter of the said bill; and,

Whereas, Said amendment, by contraverting that section of the said bill relating to the labeling of bottles containing certain drugs of a poisonous or noxious nature, would, if passed, be detrimental to the public health; and,

Whereas, Said amendment, if passed, would defeat the primary object of the bill in checking the evils of the promiscuous dispensing, on part of druggists, or various drugs of a noxious nature; therefore, be it

Resolved, That this society, in special session assembled, does hereby condemn the said amendment as pernicious to the public health, and that a copy of these resolutions be forwarded to the Conference Committee of the Colorado State Legislature, appointed by the Senate and House of Representatives to consider this amendment.

GEORGE A MOLEEN, M. D.,  
F. GILLETTE BYLES, M. D.,  
C. E. COOPER, M. D.,

Attest: Committee.

A. SILVERSTEIN, M. D., Secretary.

On motion of Dr. Grant, seconded by Dr. S. D. Van Meter, the resolutions were unanimously adopted.

On motion the chair appointed Drs. Moleen, W. W. Grant, Beggs, McGiffin and Byles a committee to present the resolutions to the Joint Conference Committee of the State Legislature.

On motion the society adjourned.

Members present, 23.

ALBERT SILVERSTEIN, Secretary.

The regular meeting of the **Weld County Medical Society** was held in Dr. Hughes' office Monday evening, February 4.

The meeting was called to order with President Ringle in the chair, and a good attendance of members. Routine business being dispatched, regular and special committees were heard from, including the governor's special, through Dr. R. F. Graham. On motion, Dr. J. G. Hughes was appointed to represent the so-

ciety on the Scientific Program of the next State Meeting. Dr. Church, for the library committee, reported a large number of standard medical periodicals to which members would have access, including the British Medical Journal.

Dr. Call's amendment to the by-laws, permitting county dentists and pharmacists to affiliate as associate members, was up for its final reading, and unanimously carried.

The paper of the evening was contributed by Dr. R. F. Graham, and was entitled "**Some Points in the Diagnosis of Diphtheria.**" The paper was illustrated by a number of appropriate clinical cases. The whole argument was for due and timely recognition of the clinical picture, regardless of the bacterial findings, no matter from what source. Discussed by Drs. Hughes, Church, Dyde, Pogue, Harmer and Warren. The physicians agreed with Dr. Graham as to the fallibility of the bacteriological examinations for various reasons, although nowise disapproving the necessity of so doing.

Dr. J. K. Miller reported a case of **facial hemiatrophy**, the second to come to his notice, giving therewith a review of the literature on this subject. Meeting adjourned at 10 p. m. CHARLES B. DYDE, Secretary.

The regular monthly meeting of **The El Paso County Medical Society** was held at the Antlers Hotel on Wednesday, February 13, and was well attended.

The greater part of the meeting was devoted to a discussion of the **insurance fee question**. The following resolution was unanimously adopted:

Whereas, The duties of Insurance Medical Examiners require a high degree of professional skill, absolute integrity and special attention to the interests of Insurance Companies, and

Whereas, The fees paid for this work are in many cases not commensurate with the service rendered; therefore, be it

Resolved, That on and after July 1, 1907, each and every member of the El Paso County Medical Society shall refuse to make any examinations for old line life insurance companies for less than the following schedule of fees; such fees to be paid by the company, and not in whole or in part by an agent or subordinate:

For each ordinary examination, including urinalysis .....\$5.00



For each examination where microscopic examination of urine, sputum or other secretion or excretion is required.....10.00 and be it further

Resolved, That the Secretary notify such old line companies as are now paying fees less than the above schedule, of the action of this society by furnishing them with a copy of this resolution.

I hereby pledge on my honor to abide by the above resolutions on penalty of expulsion from the El Paso County Medical Society.

..... M. D.  
..... 190..

Dr. C. W. Keys, of Fountain, was elected to membership.

Dr. Swan introduced a resolution requesting the city council of Colorado Springs to take such action as will insure the registration of first names with birth certificates. The records at present do not, in a large majority of cases, contain the first name of the infant, and leaves an opportunity for future trouble of a legal nature.

Dr. Patterson reported a case of **abductor paralysis of the larynx**, with supplementary reports, by Drs. Brown and Swan. After an informal discussion, the meeting was adjourned.

OMAR R. GILLET, Secretary.

The **Teller County Medical Society** met in regular session in the offices of our newly elected president, Dr. Will F. Hassenplug, February 26, 1907.

The following physicians were in attendance: Drs. Morris, Dunwoody, Hassenplug, Hereford, McIntyre, Roberts and Cunningham, of Cripple Creek; Drs. Elliott, Robison, Latimer and McClanahan, of Victor; and Dr. Hayes, of Goldfield.

A number of interesting cases were reported by Drs. Morris, Elliott and Hayes.

The president appointed the following committees: **General Advisory**—Dr. J. A. Dunwoody, Chairman, Dr. Raymond St. Clair, Dr. J. H. Hereford, Dr. A. J. Campbell, Dr. A. I. Hayes. **Program and Scientific Work**—Dr. Thomas A. McIntyre, Chairman, Dr. A. C. McClanahan, Dr. W. W. King. **Public Health and Legislation**—Dr. M. A. Robison, Chairman, Dr. B. F. Jones, Dr. W. E. Driscoll.

An elegant lunch was served by Dr. Hassenplug, after which society adjourned.

THOMAS A. MCINTYRE, Secretary.

Fort Collins, Colo., February 6, 1907.

The regular meeting of the **Larimer County Medical Society** was held in the City Hall. Present: Drs. Purcell, Bell, Roth, Kickland, Rew, Gilbert, Reckley, Taylor and Stuver. In the absence of the President, Dr. Taylor, the Vice President, presided. An agreement binding the physicians to make no examinations for fraternal organizations, lodges, etc., for less than two dollars, and signed by all the reputable physicians of the city, was presented and placed on file. The following agreement, viz.: We, the undersigned physicians of Fort Collins, Colo., would recommend that the medical directory heretofore published in the papers of the city, be discontinued, and we hereby agree that after the expiration of this directory contract, we will not advertise by means of professional cards or local notices in any of the papers of this city; except in case of a change of location, when a physician may run a card for two months, if he so desires; was presented by Dr. Stuver, and after discussion, unanimously adopted. It was suggested by Dr. Roth that we meet in one of the hotels and have lunch at our next meeting. The matter was discussed, and Dr. Roth was appointed a committee of one to look after the matter, and the Secretary to notify the members of the action taken. Each physician was then asked to report a case. Dr. Roth reported a number of cases of **ethmoidal sinusitis**; Dr. Kickland reported a case involving a number of difficulties in **diagnosis**; Dr. Stuver reported a case of **poisoning by illuminating gas**, in which the patient remained in a semi-comatose condition for about 18 hours, but is making a good recovery.

No other business appearing, the society adjourned.

E. STUVER, Secretary.

La Junta, Colo., February 12, 1907.

The President being absent, the meeting of the **Otero County Medical Society** was called to order in the County Court room by Vice President A. L. Stubbs. Those present were: Drs. Finney, Hall, Kearns, A. L. Stubbs, Jessie Stubbs, Donlon and Moore.

Application for membership by Martin F. Lamb, of Las Animas, Colo., was presented, and he was elected to membership.

A paper by Dr. H. E. Hall, "**Diagnosis of Pregnancy**," followed by one on "**Pelvic Di-**

ameters, Planes and Structures," by Dr. J. F. Kearns, were read, discussed and proved of much interest to all present. Adjourned.

W. MILROY MOORE, Secretary.

The Montrose County Medical Society met at the offices of Drs. Johnson and Johnson on January 3, at 8 p. m., President Coleman presiding. Present: Drs. Coleman, Allen, Bell, Meredith, A. Johnson, Carl Johnson.

The resolutions adopted by the State Medical Society, regarding advertising in newspapers, were read, and after considerable discussion, the following resolution was presented and unanimously adopted:

Resolved, That the Montrose County Medical Society, at the request of the Colorado State Medical Society, request the newspapers of Montrose County not to mention the names of attending physicians in cases of child-birth, or other ordinary medical and surgical cases. Drs. Allen and Carl Johnson were appointed a committee to present this resolution to the various newspapers of the county.

The resolutions of the Colorado State Medical Society, regarding fees for life insurance examinations, and a communication from Dr. McCormack, Chairman of the National Committee on Organization, were read, and after a thorough discussion of the local situation, the following resolution was offered:

Resolved, That we, the undersigned, agree to make no life insurance examinations for old line insurance companies for less than five dollars.

It was moved, seconded and carried unanimously that the above resolution be adopted and be in force as soon as signed by all members of this society and other physicians now practicing here who are, by reason of their short residence in the county, not yet entitled to membership.

Drs. Coleman and Bell were appointed a committee to secure signatures to this resolution.

The following officers were elected for the year 1907: President, J. Q. Allen; Vice President, S. H. Bell; Secretary, O. M. Clay; Treasurer, H. H. Meredith.

It was moved and carried that the time of meeting be changed to 7 p. m., on the first Thursday of each month.

Adjourned to meet at the office of Drs. Schermerhorn and Allen. CARL JOHNSON,

Secretary pro tem.

The Montrose County Medical Society met in regular session at the offices of Drs. Schermerhorn and Allen, February 7. President Allen presided. Present: Drs. Allen, Coleman, Schermerhorn, Meredith, A. Johnson, C. Johnson. Visitor, Dr. Helene Byington.

Dr. O. M. Clay, having removed from the county, the office of Secretary was declared vacant, and Dr. Carl Johnson was elected to fill the vacancy.

Minutes of the last meeting were read and approved.

The committee on fee for life insurance examinations reported that all regular practicing physicians in Montrose county had signed the resolution, and that a copy of the same had been placed in the hands of each member. The report was adopted and the committee discharged.

The committee appointed to notify the newspapers of the resolution regarding the use of attending physicians' names reported that the editors of all the local papers had been notified, and had agreed to respect the request of the society. The report was adopted and the committee discharged.

The President appointed the following committee on program for the year: Drs. Schermerhorn, Coleman, C. Johnson.

The regular meeting hour was changed to 7:30 p. m.

Dr. Allen read a paper on **Influenza**, going thoroughly into the history of the disease. The fact was brought out that the spreading of an epidemic was never faster than the most speedy means of transportation, showing that the disease is transmitted by contact and not through the medium of the air. Rest in bed is probably of more value in treatment than any known medication. "It is my firm conviction that if the average case of la grippe would immediately go to bed and remain there from three days to a week, taking no medicine, he would come out about one hundred per cent. better than if he attempted to keep at work, as many do, and fill up on coal-tar products." Phenacetin is the best of the coal-tar products, but should be given while the patient is in bed. For the bronchitis the iodide of ammonium and sodium deserve first place. Strychnia is useful in many cases. The paper was discussed by all present.

Adjourned to meet at Dr. Coleman's office.

CARL JOHNSON, Secretary.

The regular meeting of the **Las Animas County Medical Society** was held at the office of Dr. Freudenthal, with the President, James G. Espey, in the chair.

The minutes of the last meeting was read and approved. The following members and visitors were present: Drs. Thompson, Forhan, Robinson, McClure, Dowling, Jaffa, James G. Espey, Fox and Freudenthal.

Dr. Robinson reported several cases of **eczema** in which he had used the fluid extract of jaborandi locally with excellent results, also in **ulcerations about the nose**.

Dr. McClure reported a case of **varicose ulcers**, in which he had been using Unna's paste with apparently excellent results.

Dr. Jaffa read an interesting article on the differential diagnosis of **variola**.

Dr. Fox was elected to membership. The office of Dr. Jaffa was selected for the next meeting, and Dr. Dunkle to present the paper.

There being no further business, the society adjourned.

ALFRED FREUDENTHAL,  
Secretary.

## Other Societies

### Colorado Ophthalmological Society.

A stated meeting was held at the office of Dr. E. W. Stevens, of Denver, January 19, 1907. Sixteen members and five guests were present, representing Denver, Colorado Springs, Boulder, Greeley and Cheyenne.

Dr. E. R. Neepner showed a boy of 16 years with a **small bright red growth** vertically placed over the insertion of the internal rectus, rapidly growing in the past two months, and slightly pigmented above. The case suggested sarcoma. Discussed by Drs. Jackson, Black, Strader, Spencer, Hilliard and Libby.

Dr. W. C. Bane presented a case of **sclerosing keratitis**, involving corneal, scleral and episcleral tissue; and two cases of **divergent squint**, with interesting features. Discussed by Drs. Hess, Black, Neepner, Patterson, Coover and Stevens.

Dr. G. F. Libby reported the removal of a cinder which had been imbedded in the **bulbar conjunctiva for eight years**, causing a red and thickened spot of conjunctival tissue, 3 mm. in diameter, which was excised.

Strikingly beneficial results from the use of **dionin** in **scleritis** and **episcleritis** were reported by Dr. Stevens; and in **pterygium** by Dr. Neepner.

Dr. Coover reported the lodgment of half

a pin in the anterior chamber, from an air gun; and the removal of the pin by a magnet, through a corneal incision.

Dr. J. R. Robinson reported the **loss of an eye from a penetrating wound** through the eyelid, sclera, lens and other structures, caused by a curtain pin in a falling lace curtain.

Dr. E. W. Stevens gave a comprehensive and practical talk on "The Anatomy and Physiology of the Cortical Visual Tracts," illustrated by charts drawn by himself. Discussed by Dr. G. A. Moleen.

GEORGE F. LIBBY, Secretary.

## New Members

H. R. Denney, Elliott; L. V. Howard, O. D. Wescott, H. W. Wilcox, Denver; A. P. Hubbard, Meeker; A. J. Robinson, Aspen; J. C. Thompson, Basalt; Paul E. Wiesel, Glenwood Springs; Charles W. Rook, Julesburg; Horace R. Burns, Louisville; Harold G. Garwood, Gorham; C. W. Keys, Fountain.

## Deaths

Dr. J. C. B. Ray of Denver, who has been suffering from an attack of pneumonia, became suddenly worse, and died on the morning of March 5. The doctor was a native of Kentucky, and a graduate of the University of Maryland, class 1888. He was located in the Physicians Building, and was an active member of the Denver County Medical Society. He was 51 years of age. The remains have been taken to Kentucky for interment.

## Books Reviewed

**Studies in the Psychology of Sex—Erotic Symbolism, the Mechanism of Detumescence, the Psychic State of Pregnancy.** By Havelock Ellis. pp. 285; cloth, \$2.00, net. Sold by subscription to physicians, lawyers and scientists. Philadelphia: F. A. Davis Company, Publishers, 1906.

This, the fifth volume of this notable work, like its predecessors, reflects great credit upon its author, for his patient and diligent study in a field which is so dark to the majority. The deductions are carefully drawn from an amazing collection of data and sexual autobiographies. The psychic states of pregnancy are of especial interest. It is a valuable addition to the already noteworthy series.



**Materia Medica and Therapeutics, The Medical Epitome Series.** By Edward J. Kieppe, Ph. G., M. D., Professor of Materia Medica in the Department of Pharmacy and Adjunct-Professor of Materia Medica and Pharmacology in the Medical Department, University of Buffalo. 12mo, 265 pages. Cloth. Price, \$1.00, net. Philadelphia and New York: Lea Brothers & Company, 1906.

This book is admirably arranged to meet the requirements of the student, based, as it is, upon the lectures of the author. The official drugs and preparations mentioned conform to the last pharmacopea. In addition to its alphabetical arrangement, there is a complete index.

**The Ear and Its Diseases: A Text-Book for Students and Physicians.** By Seth Scott Bishop, B. S., M. D., LL. D., Honorary President of the Faculty and Professor in the Post-Graduate School and Hospital, Chicago; Surgeon to the Post-Graduate Hospital and to the Illinois Hospital, etc. Illustrated with 27 Colored Lithographs and 200 Additional Illustrations. Royal Octavo; pp. 440; cloth. Price, \$4.00, net. Philadelphia: F. A. Davis Company, 1906.

The author has attained his object in giving a clear description of the anatomy and physiology of the ear. Due consideration has been given to the examination of the patient, in a systematic manner, so that nothing shall be overlooked. An ideal record chart is illustrated.

The use of the eustachian catheter is given and its universal use in inflation very properly not encouraged.

The diseases and deformities of the auricle are fully described, and the excellent results of the author's method for the correction of deformities illustrated.

The diseases of the drum-head, the middle and internal ear, including the complications which may arise in the suppurative type, as mastoiditis, brain abscess, and jugular thrombosis, are dealt with as would be expected by one of as large experience as Dr. Bishop.

Brief chapters are devoted to acute and chronic rhinitis.

A closing chapter deals with adenoids and their removal with the Gottstein curette. No

reference is made to adenoid forceps that may be used with advantage before the curette.  
W. C. B.

**Conservative Gynecology and Electro-Therapeutics.** A practical Treatise on the Diseases of Women and Their Treatment by Electricity. By G. Betton Massey, M. D., Attending Surgeon to the American Oncologic Hospital, Philadelphia; Fellow and ex-President of the American Electro-Therapeutic Association, etc., etc. Fifth Revised Edition. Illustrated with Twelve (12) Original Full-page Chromo-lithographic Plates, Fifteen (15) Full-page Half-tone Plates of Photographs made from Nature, and numerous engravings in the text. Octavo, pp. 467. Cloth. Price, \$4.00 net. Philadelphia: F. A. Davis Company, Publishers, 1906.

This fifth edition is well gotten up, and adorned by a series of beautiful colored plates and photo-engravings. As the name implies, it is a work of the conservative practitioner, especially he who is familiar with the use of electricity. The modern surgeon, however, will find much to criticise. For instance, the chapter devoted to the treatment of Hemorrhagic Endometritis deals with the use of the galvanic current applied for weeks at a time for the cure of a condition which a simple curettage will cure in a few days. The Apostoli method of treating uterine fibroids is dealt with at length. The author seems to ignore the lessened mortality of the operation for removal of hysterectomy or otherwise since the days of Apostoli. The work contains much that is good, but I fear the average physician, and I know the average surgeon, will find it very much too conservative.  
F.

## Items

Drs. J. E. Kinney and H. S. Canby announce their removal from 1427 Stout street to suite 627-629 Commonwealth building.

Dr. E. W. Lazelle has just returned from abroad, and is now located in the Majestic building, Denver.

Dr. H. C. Menkel, formerly of 233 Temple Court, is located in Calcutta, India.

Dr. Jacob Gish, formerly of Delta, is now located at Olathe.

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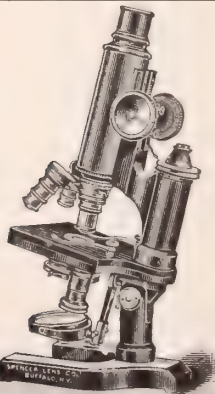
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# COLORADO MEDICINE

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All communications to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are *typewritten*.

Communications and items of interest are invited from all parts of the state. Death notices, removals, changes of address, etc., are especially desired.

*Secretaries* of the County Societies are earnestly requested to report their meetings, including the subject matter of the papers presented, and in general, the substance of the discussions.

Marked copies of local newspapers, or clippings, containing matters of interest to the profession will be gratefully acknowledged. The name of the sender should be given.

The journal will be issued on the 15th of each month. All copy must reach the editor not later than the first of the month. Advertisements of proprietary medicines will be accepted provided the preparations advertised have been approved by the Council of Pharmacy and Chemistry of the American Medical Association. Address all communications regarding advertising to

JAMES M. BLAINE, M. D., *Adv. Mgr.*, 3-4 Steele Block, Denver, Colo.

## IMPORTANT NOTICE.

All members of the Colorado State Medical Society are entitled to a copy of this journal each month. Failure to receive the same, and change of address, should be promptly communicated to the editor.

VOL. IV.

DENVER, APRIL, 1907.

No. 4

## Leading Article

### THE PARANOIA PROBLEM.

Apropos of the familiarization to the general public of the term paranoia through a recent trial for murder, the *New York Med. Jourl.*, March 9, 1907, outlines editorially some of the varying conceptions of mental alienation which have received this appellation. The editor calls attention to the fact that practically every psychiatrist whose opinion is worth much uses the term in a different sense and, therefore, any discussion of insanity designated paranoia should concern not the word but the particular author's application of it. "In former times delusional mental states, especially if of a persecutory nature, were called paranoia, and hence admissions of patients with 'paranoia' to hospitals have been as high as 70 to 80 per cent. When at a later time it was noted that delusions of persecution were amongst

the commonest of morbid mental symptoms, and often a part of clinical pictures of insanity whose course and outcome were dissimilar, the diagnosis 'paranoia' began to be made with diminishing frequency. Some extreme followers of Kræpelin contend that there are no patients presenting so-called 'paranoia' delusions who may not be ranked with those in some other group of latter day classification. Kræpelin, although largely instrumental in limiting the conception of paranoia, has until now not taken this position."

"For practical purposes, both from the standpoint of psychiatry and from that of the law, the 'paranoia' group, as recognized by moderate views, may conveniently be divided into three general heads. Morselli, in 1883, described in clear terms a rudimentary or abortive paranoia. Such forms have been described by German and French writers as mild insanities in which various phobias, fixed ideas and obsessions are features developed on a



psychopathic foundation" recurrent hypomanias, or so-called recurrent paranoidias, with no specific mental reduction in the lucid intervals. "Delusions of persecution are frequently encountered. The group is a large one and much in need of exact delineation. The chronic delusional manias of fifteen years ago are to be ranged in a second group. These are the post-infective and post-toxic forms, and include also the persecutory states of the alcoholic, morphinist and cocaineist." i. e., all these examples of acute or chronic exhaustion (toxemic) confusional insanity. "In this class must also be placed the dementia "paranoid" group of Kræpelin, in which the intellectual deterioration, disorder of attention and lowering of the emotions aid in diagnosis, which, nevertheless, presents at times insuperable difficulties." Most psychiatrists would dissent from classifying these paranoid manias with almost invariably resulting early dementia, with types of exhaustion exaltation or dementia or true manic-depressive forms of far better prognosis. The syndrome I most depend on to differentiate dementia paranoides from the latter conditions is the association of kinetic impulse, cynical malicious humor, and an appreciable mental deterioration in the guise of destructive mischievousness, which, when mildly developed, is normal as an occasional paroxysm in the growing child. "A third group includes the so-called primary paranoidias. These originate, as a rule, upon a psychopathic basis, and are characterized largely by the development of delusional systems in the face of relative clearness. Acute and chronic forms are widely admitted." A group so heterogenous as to be of little service in our concepts of systematized delusional insanity. To prove, in a given case, the fixed idea primary to delusional interpretation is a precarious procedure.

Again, acute forms in that there is insufficient time for profound change of personality had best be grouped with manic-depressive or toxic exhaustion types. "The chronic systemized forms then make up the remainder of this general group and include the chronic delusional insanities made classic in regicides, reformers, insane religious leaders, persecutors and litigious and erotic paranoidias. In as much as the definition of this type includes the idea of chronicity, without early intellectual defect, the prognosis is foreshadowed in the definition. It is admittedly bad, but judgment must always be suspended until the disease has been in progress for a number of years. Reports of recovery by numerous observers, notably cases of Mendel, Meschede, Bleuler, Freyburg and Bartels, of patients who have suffered from chronic systematized paranoia for a number of years are now of record. These accounts should lead even the most pessimistic of observers to admit the possible curability of chronic systematized paranoia, even in its severest types. Other reports make it imperative to reconstruct some of our opinions relative to the occurrence of mild cases of paranoia with favorable outcome."

To bring a new fact to psychiatry, curability of paranoia must refer to cure of that form of chronic insanity with systematized delusions, which in recent years has frequently been called Kræpelin's paranoia. It must be remembered that in these cases (approximately paranoia persecutoria of Krafft-Ebing), the latter and many predecessors recognized remissions, some of long duration. Acute conditions presenting systematized delusions, with little or no involvement of the affective faculties, without confusion or dementia, I have personally never seen and, therefore, I share opinion with those

psychiatrists who prefer to associate these cases with one of the other recognized types, which they resemble. We need recall, meantime, that Kræpelin's descriptions, which, without doubt, have dominated clinical psychiatry during the last decade, often stand for archetypes only, and that, therefore, we can in practice, not always generalize from even these masterpieces of clinical description. In the absence of a material mental pathology, certain clinical pictures stand without the pale of present classification, and for this reason alone we learn that prognosis must ever be guarded. A matter which often must weigh heavy in our prognostications is the modifying influence of correlated clinical elements, as, for instance, the probable amelioration of the clinical picture where manic-depressive symptoms are merged with the progressively elaborated, systematized delusions of Kræpelin's paranoia; or, again, the different prognosis from the latter of paranoid symptoms in the young when these are complicated by the destructive kinetic impulses and paroxysmal temporary improvement of katatonic dementia præcox. There are times, indeed, when the elaborate data of anamnesis and continued observance, which is requisite to prognosticate insanity from clinical concepts, makes one wish that careful analysis of actually presenting conditions of the mind would suffice to make apparent further course and outcome of the case. In a way this was the earlier method of judging a patient by the presenting phase of his aberration, and it seemingly led to simple and adequate classification. Refinement of clinical differentiation brought with it classification complexity, but we have learned that nothing is really gained by attempting to reduce to simplicity that which is really complex.

For the future, what? To my mind greater simplicity in the clinical compre-

hension of insanity and of its prognosis can only come from a knowledge of those primal intoxications incident to morbid metabolism, many of which affect mentality. When we know more of such pathologic physiology, when we can correlate it with mental disease manifestation and with the effect of natural and artificial antitoxins, we will have advanced much. At such a time mere chronologies as to disorientation, of delusions arising from mental exaltation and depression, of effects of disturbed apperception, or, indeed, of aberration of primal impulses without delusions, etc., will be given place subsidiary to physical causes of mental pathology. For this reason my hope for a deeper insight of mental alienation, viewed clinically, rests with the physiological chemist rather than with the psychologist.

BERNARD OETTINGER.

## Editorial Comment

### OUR NEXT MEETING.

The next meeting of the state society will be held at Glenwood Springs, September 17, 18 and 19. This meeting is given as a compliment to the western portion of the state. It is very gratifying to learn that much enthusiasm exists in the societies in that section and that they assure us of the success of the meeting. It will certainly be a sad reflection if a very large western attendance is not in evidence. It is hoped that we shall have the pleasure of seeing a number of our friends from Utah. A most cordial invitation will be extended to them.

The plan outlined in a former letter has been decided upon, and that is to open the session at 10 a. m. and close at 1:30 p. m. The remainder of the day will be devoted to pleasure, and we learn that there will be more than we can take care of in the way of pleasure. The first

two days will be devoted to the program composed of papers presented by representatives of the various constituent societies. The last day will be given over to the sections. The chairmen of the sections have been appointed.

Dr. Leonard Freeman, of Denver, is chairman of the section on Surgery, Gynecology and Orthopedics; Dr. Herbert B. Whitney, of Denver, of the section on Pediatrics, Contagious Diseases and Sanitary Science. Dr. Hubert Work, of Pueblo, of the section on Internal Medicine, Nervous and Mental Diseases. Dr. Robert Levy, Denver, of the section on Ophthalmology and Oto-Laryngology.

The chairmen of these sections are given full power to arrange their programs. Members of the society who desire to read a paper before one of these sections would do well to communicate with the section chairman in whose section he desires a place. There is room for only eight papers in each section, and many places have already been spoken for, so do not be disappointed if you make application after it is too late.

MELVILLE BLACK,  
Secretary.

#### *THE GREAT AMERICAN FRAUD.*

A second edition of the pamphlet has been issued by the press of the American Medical Association. This edition includes, besides those contained in the previous one on patent medicine, the ones written since by Mr. Adams on Quacks and Quackery.

The desire on the part of the Association that these should reach as many of the profession as possible is responsible for the extremely low price. Single copies are obtainable from the American Medical Association at 10 cents, with a liberal discount on larger quantities.

#### *A NEW PATHY IN TEXAS.*

A chartered college at Glen Rose,

Texas, teaches "Quadopathy," states the *Texas State Journal of Medicine*, the "Quad" refers to the use of the "combined methods of bloodless surgery, vithopathy, osteopathy and electro-therapeutics."

In a circular issued by the school it is stated that "Not a single case of pneumonia, spinal meningitis, appendicitis or any so-called fatal diseases. Asthma, paralysis, female and stomach trouble are as easily cured as chills by the method." When the lack of prefixes necessitates the resort to the numerals, there is no "end" in sight of the possible "pathies."

#### *COMPLIMENTARY LECTURES ON SKIN DISEASES.*

The New York Skin and Cancer Hospital announces four closing lectures by Dr. L. Duncan Bulkley, as follows: March 27th, Practical Points in the Diagnosis and Treatment of Diseases of the Skin; April 3d, Errors in Diagnosis and Treatment, Dents in Dermatology; April 10th, Danger Signals from the Skin; April 17th, The Significance and Treatment of Itching, and Dr. William S. Bainbridge will lecture April 24th on Some Phases of the Cancer Problem, illustrated by a series of cases.

The lectures will be free to the medical profession.

#### *FOREIGN APPRECIATION.*

That the work of the Council of Pharmacy and Chemistry is attracting attention is evident from the desire to cooperate in the work on the part of Prof. Dr. H. Thoms, of the Pharmaceutical Institute of the University of Berlin, who is directing a similar line of work for the German Apothecaries Society (Deutscher Apothekeverein). It is probable that the Trustees of the American Medical Association will appoint Professor Thoms as a corresponding member of the Council. This action should excite a higher appreciation of the work in our own country.



## Original Articles

### *THE FREE DISPENSARY AS A FACTOR IN THE TUBERCULOSIS CRUSADE.*

By A. S. TAUSSIG, M.D., Denver, Colo.

Since Koch's discovery of the tubercle bacillus in 1881, so much has been written about tuberculosis, that it seems a waste of time to bring a subject that has been attacked from all sides by the ablest minds of the world, before this society. During the past few years, however, a decided change has taken place in the attitude of the general public towards tuberculosis. Formerly considered a purely medical problem, it has today aroused the attention of all classes of citizens, enabling our profession to attempt the solution with more confidence. A disease that annually destroys in this country between fifty and sixty thousand persons, most of whom succumb during the most productive period of their lives, is more of an economical than medical problem, and should justly attract the attention and co-operation of all the departments of the state.

One of the weapons that has proven efficacious in combatting this disease, has up to the present time, not received the notice that it should have received and this fact, I believe, justifies me, in bringing before this society, the great value of a properly managed free dispensary in the cure and control of tuberculosis. A brief consideration of the uses and abuses of a free dispensary will enable us to weigh more correctly its value in this field.

A free dispensary should be conducted, primarily, for the benefit of the sick poor and secondarily, if connected with a medical school, for the benefit of students and practitioners. The medical profession has always given service freely to those who

were in need, and in the great majority of instances this service, I believe, is given the patients without damage to their self respect.

No American who has attended the polyclinics in Germany will ever forget the brutal manner in which patients are handled; caused almost entirely by an absolute misconception of the prime function of the polyclinics. The tendency of the free dispensaries today is towards increase in number of departments; laxness in the supervision of admission of patients, and more recently their development into schools to educate the indigent in the prevention of the spread of disease. Some of these tendencies will be treated of more fully in this paper, others are not within its scope and need not take up our time.

No one who has had experience with the modern free dispensary will question its great value to the general public and the medical profession at large. The large number of patients who are given assistance and enabled to again become bread winners, would in itself justify the maintenance of the free dispensaries by the state as an economical measure. To the student it means the really practical education and fits or unfits him for his future work. Whatever faults our present dispensary system may have, we feel that it is one of the most essential features of our medical educational system, and will in years to come tend to develop more and more the best that we have in the science of medicine.

It would be unwise to consider only the advantages of the free dispensaries. Knowledge of the defects of a system if the system has real value to the community, merely adds to its usefulness. The medical profession today is being crushed between two forces, far removed in their tendencies. The one, a combination of capitalists who consider a man an interest-bearing machine, the other, a com-

bination of medical men who treat the sick poor free of charge, without investigating their ability to pay for medical treatment. We must guard particularly against the latter danger to our profession for it lies within our power to control it. A physician who is forced to leave our ethical ranks by these above mentioned conditions is as serious a menace to the community as a laboring man who is forced into the criminal class by illegal actions on the part of capitalists, is to society. Anyone who wishes to foresee the battle that will undoubtedly take place between the physicians and the free dispensary, may by looking up the English medical journals for the past twenty years get a foretaste of it. The battle royal between the free and provident dispensaries and the general physician in England has served to compel a man who was able to pay for medical services to do so, even if the sum was insignificant.

Our profession should not be first to teach the poor to become dependent upon charity. Once a man has received medical services free of charge, it is a short step for him to ask the state to furnish him with the wherewithal to live. We degrade the poor, and injure the members of our profession who attempt to practice amongst them by not seriously heeding and controlling this danger.

The Charity Organization and the Health Department are two institutions that should be closely related to a free dispensary, and still not diminish their own usefulness by attempting to run one. Our Charity Organization in Denver has for years been a centrally organized and sanely managed institution, far superior to many like organizations in the larger cities in the East. It has always been ready to assist any institution that proved itself worthy of support. This same spirit may be found in many of the cities in this country where the organizations are directed from a central office. It seems to

me, in self defense, if for no other reason, they must investigate and assist the free dispensary. The Health Department should be ever ready to assist the profession in combatting the spread of the disease, but not in treating it. The example set by the New York Board of Health in establishing a free dispensary for treatment of tuberculosis will no doubt be followed by many other Boards of Health throughout the country and result in endless struggles between the physicians and the public institutions. Within the past six months a physician in Brooklyn brought injunction proceedings against the Board of Health to prevent it from establishing a tuberculosis dispensary in his neighborhood, claiming that it imperiled the health of his patients. The injunction was granted and an appeal taken to higher court. The *J. A. M. A.* of April 14, 1906, commenting on this case, says: "We hope that no other city of the Union will give the public such a choice bit of *opera bouffe*. It may be very aggravating to private physicians to have the Board of Health go into the dispensary business, but the testimony on both sides so bunglingly conceals the motives that we fear the judge must have had a violent fit of coughing when he gave his verdict." As long as the Health Department stands ready to lend a helping hand to the physicians in dispensaries and employs its time in the prevention and detection of communicable diseases, it will be working within its proper bounds and be a help rather than a hindrance to the private physician and his work.

Whatever the character of the institution that is supporting a free dispensary, no matter in what city or locality it may be situated, in justice to the medical profession, it should investigate the cases before they are admitted for treatment. The patient should always be given the benefit of the doubt, but this does not justify the indiscriminate acceptance of cases,

nor the pauperizing of physicians who have for years worked faithfully to obtain a foothold. The task of investigating cases is no greater than that which confronts the Charity Organizations in their endeavor to weed out the unworthy, and is as necessary to the advancement of a community.

The work that has been done by the free dispensaries during the past ten years shows a marked advance over that done during the preceding decade. A true appreciation, however, of the value of dispensary work to the student, profession and general public is not yet at hand. Sir Andrew Clarke, many years ago, well said: "In the hospital wards disease is seen in its later stages, in the out-patient department in its inception." A fuller appreciation and utilization of the clinical material in a statistical way, and the furtherance of research work, will well repay the general profession for much of the injury it has suffered from free dispensaries in the past.

The question of the passage of a free dispensary law is one that concerns the practitioners throughout this country; its enforcement is dependent upon the zeal with which a united profession demands it. Shall we wait until our conditions parallel those in Europe? Mr. Savage in an address before the International Conference of Charities and Corrections in Chicago in 1903, said: "Anyone can receive free treatment, no questions asked, in the out-patient department of the hospitals in Germany, France and Austria." It certainly seems possible that a reasonable law could be passed in all states, compelling dispensaries to get a license from the State Board of Charities, license to be revoked in case the financial condition of applicants is not properly investigated, or the patients improperly treated.

It seems to me wise to discuss the free dispensary from various standpoints before lauding it as the most valuable agent against tuberculosis.

Isocrates, in the fifth century, before

Christ, taught that tuberculosis was contagious. On December 5, 1865, Villemin, before the Academy of Medicine in Paris, demonstrated the inoculability of tuberculosis in animals; six and a half centuries from the inception of the idea before it was proven correct by actual experiment. Until the latter part of the eighteenth century tuberculosis was generally believed to be contagious, but from that time, until the middle of the nineteenth century, the scientific minds became imbued with the influence of heredity, and held back for a half century the general acceptance of the communicability of tuberculosis. On September 20, 1782, Naples, by royal decree, attempted to wipe tuberculosis from within its domain. The oppressive laws passed, although affecting markedly the death rate from tuberculosis, soon became a dead letter. The same spirit again sleeps for almost a century, to again come to life during our era with almost as fanatic zeal. Hippocrates, in the fourth century before Christ, first intimates the rational treatment of tuberculosis, but we must wait centuries before Bodington, of England, in 1840, carries out the ideas. These periods of apparent inertia and false direction can be best explained by quoting from an article which appeared in the London *Lancet* March 31, 1827: "Medical history furnishes abundant examples of the perpetuation of error through prejudice and ignorance, and of the opposition which the most palpable truths have experienced, from men desirous of being regarded as medical philosophers." The value of the above historical sketch is apparent. Whatever instrument we may use for the suppression of tuberculosis, we must not be swayed too much by popular support, or the power given us by law to enforce our theories.

During the past two decades the prevention of the spread and the cure of tuberculosis has depended practically upon the building of sanatoria, and the education of the general public by anti-tubercu-



losis societies and sanitary authorities. How forceful these movements have been is shown by the decided decrease in the mortality statistics of tuberculosis throughout the civilized world. Whatever we may feel regarding the likelihood of wiping tuberculosis from the face of the earth in the future, we of today must minister primarily to those who are afflicted with the disease, and concentrate our energies towards relieving and educating the spreaders of it.

No one who has treated tuberculosis in a free dispensary in the past, has failed to see how impotent a weapon it has proven to be, and the majority have felt that properly managed and controlled, such an institution would become the most forceful agent for the cure and prevention of tuberculosis. The realization of failure is often times the first step towards success, and I firmly believe that the next ten years of the tuberculosis battle will be waged more successfully in the free dispensaries than in any other field. Whatever remedial agent may be found in the future, at the present time we are almost entirely dependent for the cure of tuberculosis upon the living of a life properly amidst hygienic surroundings. As now conducted, dispensaries can offer to the sufferer nothing but advice, of which the average patient has received more than his share. It was with the firm belief that this deficiency could be remedied that led me to bring this topic before the society.

#### AUXILIARY AGENCIES.

The Charity Organization of a community should be one of the most effective assistants to a free dispensary for tuberculosis. As a rule, it is called upon after the possibility of cure has disappeared, or after the patient's body has been so seriously damaged that he cannot again become a wage earner. In the majority of cities the Charity Organization is

grappling with one end of the problem, the dispensaries with the other. Instead of uniting and efficiently dealing with the subject, the two forces, realizing their respective defects, the one of finances, the other of medical direction, are dealing with the problem half-heartedly, and wasting a great deal of energy and money. I believe in the larger cities of this country the Charity Organizations would gladly assist the properly conducted dispensaries, and consider a union of the two forces a great advantage. The free dispensaries would certainly be anxious to become efficient through the Charity Organizations. In our own city, few appreciate the enormous burden that is borne by our Charity Organization in dealing with the indigent consumptive, and it behooves the medical profession to assist the organization in every way possible in the solution of the problem.

Closely affiliated with the Charity Organization is the Visiting Nurses Association, which in almost every community is doing pioneer work in the prevention and spread of tuberculosis. In our city the Visiting Nurses' Association is supported in part by the Charity Organization, and in connection with it, is doing a service for the community that should be heartily commended. The free dispensary lacks the services of nurses who could investigate the tuberculosis cases at home, and assist in the distribution of food, sputum cups and literature, and see that instructions given in the dispensary are carried out. The union of the three forces would certainly be of enormous benefit to all the parties concerned, and result in a more economical and scientific distribution of the forces which are now individually striving to better the condition of the consumptive.

The Health Department in many of the large cities has taken a decided stand in combatting tuberculosis, and will usually

be found willing to assist the institutions that are striving to prevent the spread of tuberculosis. As stated in the first portion of the paper, it seems unnecessary for the Health Department to open dispensaries of its own when by co-operating with well-founded and ably directed dispensaries it can conserve energies and assist in the upbuilding of proper tuberculosis dispensaries. The dispensaries can, through the Health Department, insist on proper respect of ordinary hygienic rules by ambulant and bed-ridden consumptives, and direct the forces of the department against the portions of the city that are mostly invaded, and thereby assist the department in the spread of the disease.

We have considered the defects of a free dispensary, and have shown how, by union of forces with like aims, it can increase its usefulness. The dispensary that wishes to treat tuberculosis successfully must be managed in an entirely different manner than tuberculosis dispensaries are usually conducted. The patient must be controlled as much as possible, while away from the clinic, and the dispensary must be adapted to the needs of the patient, and not to the requirements of physicians and students. Through the Visiting Nurses we can get an idea of the patient's surroundings and needs, and endeavor in every way to see that their money is sensibly expended, and the aid furnished is properly used. In the dispensary itself, every possible means should be used to impress the patient with the danger of the spread of his disease, the ease with which his sputum can be properly handled and destroyed, the kind and cost of food necessary to maintain him, diagrams of tents, porch shelters, proper methods of ventilating, instruction pamphlets; in fact, a small sized tuberculosis exhibit should be in hand, where those who are

personally concerned and interested may learn to combat this disease intelligently and economically.

The large number of cases that can be cured by proper treatment, and the kind and cost of food necessary to maintain the consumptive, should be impressed upon his mind by charts hung on the walls of treatment rooms. A tuberculosis exhibit in a *dispensary* would be of more avail than in any other place. The stricken ones are alert enough, if we will but take time to teach them.

The rooms where patients wait and are treated should be bright and well ventilated so that the patients may intuitively feel that the physician realizes the importance of good ventilation. In one of the large tuberculosis dispensaries of the East, the room in which the patients wait and receive their diet cards, medicines and instruction pamphlets, is so dark and gloomy that no one would suspect that the poor patients are gathered there to learn how to live properly. The ventilation, if found in a patient's residence, would be condemned by any of the Visiting Nurses of the institution. There is no better tonic for these sufferers than good cheer. Give them courage to fight week after week, and the results will justify the expenditure of nervous energy.

Through the agency of Charity Organizations and Visiting Nurses' Associations milk could be distributed to those truly in need of food, and, in some instances, patients should be compelled to drink milk *in* the dispensary to prevent them using it at home for their families. Night dispensaries could be formed for laboring men. Occasional addresses to patients, encouraging them to partake in discussions and to assist each other in procuring positions would be helpful. What a revelation such a dispensary would be to the ordinary medical student who has

heard lectures on tuberculosis but has never met the disease face to face! The students who are now leaving our institutions will be the leaders in the fight ten years hence, and must be properly educated if we expect them to have a decided influence upon the disease.

We in Colorado who are carrying more than our share of the burden which is crushing the very life out of the poor laboring man, must handle the tuberculosis problem with the utmost care. The radical steps now being taken in the East would be inappropriate here, but some steps must be taken to properly handle the consumptive in our midst, and, I believe, the one that would bear the best fruit would be the establishment of tuberculosis dispensaries under the direction of the colleges or any other responsible institutions.

Sanatoria, camps, hospitals and farms are all important factors in assisting the tuberculosis to become bread winners again, but they will never be able to assist a large proportion of those suffering from the disease, on account of expense. The dispensaries, on the other hand, if run economically and at hours when the poor laboring consumptive can attend, will be able to reach a large number of those who need assistance most and will best repay the community for the amount expended.

#### Discussion.

Mr. James H. Pershing: Mr. President—It is a pleasure for me to listen to the reading of this paper and to take part in this discussion. You can hardly appreciate the burdens placed on the community in the care of tuberculous cases, and the work that the Charity Organization is doing. It is unnecessary for me to say to you that it is a great problem, and that we are spending considerable sums of money in its solution. The main difficulty is how to deal with the problem intelligently. The first thing is the method of organization, to know what its scope and limitations are. That is the thing we are trying to do in Den-

ver at the present time. The Visiting Nurses' Association is spending no less than five thousand dollars a year, a large proportion of which is spent in tubercular cases. The central office of the Charity Organization Society spends one-half of its income in the same way. Ninety per cent. of the expenditures of the Jewish Relief Society is occasioned by tuberculosis. Therefore, the problem is a burning one with us, and one which needs the co-operation of the medical profession more directly than any of the other problems with which organized charity has to deal.

One of the first principles of organized charity is to make one charity grow where two grew before. Therefore, in the matter of free dispensaries, the first thing, it appears to me, is to have the work so organized that there will be no dissipation of energy, and that the problem of a free dispensary will be dealt with strictly from the standpoint of the dispensary, and not too much from the standpoint of individual enterprise, with the assumed desire for medical education. I recognize primarily that a free dispensary, as conducted in connection with a medical college, or by the profession in any way, is a factor in medical education. It must necessarily be so in order to secure from the medical profession the interest to continue it. But associated with that motive should come the important factor of assisting the dependent poor. No members of the community give their services more freely than the medical profession; but nevertheless, it seems from my observations that the members of the medical profession, like a great many other people, who approach the question of dependency, are not quite as anxious for direct organization and concentration of effort as they might be.

That brings me, therefore, to speak of the imminent dangers that surround this question of a free dispensary. You all recognize what that is. When a free dispensary encroaches upon the income of the physician it is an evil. The direct limitations of educational methods can be carefully and properly taken care of without such encroachment. There are plenty of dependents who need assistance from free dispensaries without fostering applications for charity which encroach upon the legitimate income of the medical profession. A second danger is to the public itself. The free dispensary is just as likely to create pauperism as bread lines and soup houses. The free dispensary should be managed like all other chari-



ties. The Charity Organization Society is frequently called upon to devise means for establishing free dispensaries. We have discouraged the indiscriminant establishment of free dispensaries, although we would like to see one thoroughly equipped free dispensary in the city of Denver that will take care of all pauper cases. To remedy the defect, the only efficient method that can be suggested in my judgment is the one outlined by Dr. Taussig; that is, a free dispensary should be run under some form of organized charity. The dispensary management cannot ordinarily determine the merit of applications for free treatment. Investigation must be made outside of the dispensary as to those who are really dependent. Such a dispensary should co-operate with the Charity Organization, with its central office thoroughly equipped for investigation, where references can be made to the visiting nurses, where agents can be sent directly to the homes of the tubercular poor, to investigate the necessity for dispensary treatment. If such an arrangement should receive the co-operation of the entire medical profession, the profession and the public as well would be relieved of a great danger.

The suggestion of Dr. Taussig for co-operation between the dispensary and Charity Organization is one of the very greatest importance.

As to the benefits to be derived from a free dispensary, the first thing is education, not, as formerly, the education of the medical profession or medical students alone, but the education of the tubercular poor themselves. We all recognize the dangers and limitations of education in preventing the spread of disease as well as the danger of hysterical excitement on part of the public generally, but if the tubercular poor could be brought in contact with a properly organized free dispensary, it would be one of the most efficient means of education of which we can conceive; and the economic advantage, as Dr. Taussig has pointed out, during the most productive period of life, is one of the greatest importance. Therefore, if I am permitted to speak in the name of the organized charities of Denver and Colorado, I would urge a closer co-operation of the medical profession and of the forces of organized charity. You hardly realize the work that the visiting nurses are doing in this community. Every physician, who has a dependent case of tuberculosis in this city,

should register it with the Visiting Nurses' Association, and it will be properly taken care of, in all its phases, leaving the physician to deal with the medical features alone.

I wish to thank you for the opportunity of coming before you and saying a few words on this subject, as I consider it a question of great importance both from the standpoint of the medical profession and of the public.

Dr. F. E. Waxham: I have listened with a great deal of interest and pleasure to the paper that has been presented to us, but while listening to it I could not help thinking if the plan evolved by the writer could not be improved upon by combining with it the one that has been formulated by the Public Health Association of Berlin. Personally, I am not much of a believer in closed dispensaries for tubercular patients. The plan adopted in Berlin seems to me to be an ideal one. In 1899 the Public Health Association of Berlin formulated a plan for the establishment of day cures, day resorts, as they were called. This plan included the accommodation of all patients except those suffering from acute contagious diseases. They consisted principally of the convalescents from the various hospitals, the anemics, and nervous wrecks, the tubercular patients, numbering about one-half of the total number, and those whose means were insufficient to enable them to get away from a large city during the days of summer. The first day cure was established in 1900 for men, and accommodated 150. The establishment consisted of an area of ground two or three acres in extent, surrounded by a wire fence, and containing a large wooden building, a kitchen and office, a room for the attending sister in charge, and a large room for the accommodation of the invalids during inclement weather. The patients were provided with blankets, with reclining chairs, and with all necessary accommodations. The first establishment was so successful that others were established.

In 1901 another cure was established for men, and in 1902 one for women, and in 1903 another one for women and children. The accommodations were only for 150 in each cure establishment, but very soon these institutions became crowded. The poor people, who resort to the dispensaries, report at eight o'clock in the morning; are given a luncheon upon their arrival, and are then allowed to recline in chairs and rest, or converse or play light games until noon. At noon they are

given a good hearty meal, and then are obliged to rest for an hour or an hour and a half. Then they are given a light lunch of milk and rolls; and at seven o'clock they scatter to their various homes, after receiving another luncheon. They are educated, and trained in these day cures in the way of self protection and the protection of others from tuberculosis. The plan of establishing these cures was so successful in Berlin that they soon became established in the larger cities of Germany, in Belgium, in France, in Vienna, in London, and the first day cure or day resort was established in this country in Boston at the Parker Hill Sanitarium. The establishment is at Roxbury, just outside of Boston, some three hundred feet above the level of the sea, where the patients are free from dust, noise and confusion of a great city. Here they can spend their days from the first of May until the first of November. They receive not only necessary medicine, but fresh, pure air. They have something to occupy their minds, which is an important factor in their treatment; and they have also the benefit of food and rest as well. At Roxbury, at the Parker Hill day cure, the patients are met by the park vehicles and conveyed from the station to the day cure establishment. They are given a good substantial dinner, and in the middle of the afternoon they are given light nourishment and again food before they are sent to their homes. The cost of such an establishment is from \$800 to \$1,000, including the buildings necessary, the establishment of hydrants, water closets, reclining chairs, blankets, eating utensils, etc., and it seems to me this is an ideal way of treating our tubercular poor.

The day cure at Boston admits only tubercular patients, and the results have been truly remarkable.

We are all familiar with the good work of the Charity Organization of Denver, and I believe it is perfectly feasible to establish such a plan in this city where we have a large number of tubercular poor, who hang about our streets, lonesome and sick, with nothing to occupy their time and living in unhygienic surroundings.

So far as instruction is concerned, that can be given just as well for medical students in such a day cure as in a closed dispensary, and the public need not be imposed upon any more than they would be in a free dispensary. Those able to pay for accommodations should not only be permitted, but be obliged to do

so, and it would appear to me an ideal work for our charity organizations of Denver.

Dr. Singer: It seems to me, one of the most important phases touched on by Dr. Taussig in his paper was the question of environment. It has long seemed to me that the physician, if he would fulfill his duty and his mission, should realize that his first and most important work is with regard to forming a part of the patient's environment. The environment of these patients can be greatly changed, so that the patients can be helped mentally and physically, and we should endeavor to so shape their environment as to be one of the factors in the ultimate cure.

Dr. Moses Collins: I would like to touch on one or two points in connection with this paper. For two sessions at the meetings of the Association of Hospital Superintendents, held at Philadelphia and in Cincinnati, the abuses of dispensaries were thoroughly discussed. Two able papers were read at these meetings, one by Mr. Woodridge, of Philadelphia, and one by Dr. Peters, of Providence, R. I. The former gave a list of abuses in dispensaries on the part of patients and on the part of the medical profession. But I do not want to go into them at this time. Dr. Peters stated in his paper on the proper management of the dispensary in connection with a hospital, that of their own volition the staff of the Providence Hospital all had taken up the question of abuses of dispensary service. The staff itself conducted an investigation, and in the first year applied remedies which they had decided upon, and of which I will speak briefly. They found by investigation in the first year that enough people unjustly applied for free services which in money would amount to nearly half a million dollars. They have systematized the work of investigation, not by applying to the charity organization for help in this matter, but by the appointment of an agent who is located at the dispensary, and whose business it is to investigate the applicants that apply for free service in a gentlemanly, tactful manner, and they have succeeded by this method in eliminating practically all undeserving cases that apply at the dispensary for free service. They have gradually reduced the number of applicants who are not worthy to almost a minimum. A notice is placed in the dispensary rooms, stating exactly what the dispensary will do; that it is there for the worthy poor, and that no one can receive free service unless he presents a letter of rec-



commendation from people who are known to the dispensary staff. Not only that, but applicants are compelled to pay a small fee, nominal for such material as may be required, giving, however, **gratis** that which ought to be given. This method practically eliminates the abuse of the dispensary.

There is one interesting point that was brought out by the writer of the paper, as well as by the president of the charity organization, and which I believe was touched on lightly by our distinguished guest, Professor Cabot at the banquet last night, namely, that when we have prescribed for patients in a dispensary, or have given the medical advice for which these patients come, our work is only half done. This reminds me of an incident related by Dr. Knopf with reference to a patient who applied at his dispensary in New York. This patient was given a tonic, shortly after which he said that his appetite had improved very much; but Dr. Knopf said he could not understand why the patient was not gaining in weight and condition. The patient informed Dr. Knopf that while he had a good appetite, still he had nothing with which to satisfy it. So, while we look after the medical side of the patient, we must also look after his physical condition and social well-being, and that is a part of the work which is now being done in some of the hospitals of Boston, and which, of necessity, must fall either upon a sociologic department of the dispensary, or the charity organization by co-operation.

I am very glad that the question of convalescent homes was mentioned by Dr. Waxham, as I intended to refer to that myself. It is another method of relieving the poor which is being strongly advocated by various superintendents of hospitals in the East, and they are doing it for this reason: Hospitals, as a rule, are crowded. The patients are sent out from institutions much sooner than they ought to be, and in the hospitals of New York, or Boston, and other large cities, convalescent homes have been established to take care of the discharged patients who, while they are able to leave the hospitals, are not yet able to go to work, and in connection with this statement I would like to mention here what the superintendent of charities of Cincinnati mentioned to me the other day. They had discovered among two or three of the poor who had been allowed to go to work early after their discharge from the hospital, that sooner or later they became ill, weak, and

were compelled to leave work, or that they had contracted some other disease because of their anemic condition, and they came to the conclusion upon investigation that thereafter that the convalescent poor, after their discharge from the hospital, should be sent to some convalescent home or place where they could recuperate fully before their return to work.

Dr. George R. Pogue: I have not any advice to offer so far as the management of the consumptive poor is concerned by charity organizations, or what their duties should be. There is one thing we need more than anything else, and that is not only the education of the consumptive, but the education of the laity at large—educated to a point that they will understand a man or woman suffering from tuberculosis, who takes care of the expectorations and excreta, is not a source of infection. We find tubercular patients driven from house to house, from one place to another, simply because the public at large have become afraid of any man who has a cough or who is pronounced tubercular. Education of the public can be brought about by the efforts of the medical profession only. This subject is one of national importance. The federal government very often takes it up. The subject of tuberculosis has been taken up by the federal government, but there has not been a dollar spent. Forty-six million dollars have been spent by the Agricultural Department in the last ten years. How much has been spent by the Health Department of the National Government in that time outside of a few epidemics of yellow fever, etc.? This question should be brought up and discussed from all points. The public must be educated, and when this is done, and the national government is interested, we will have the aid there that we should have, the same as they have in European countries.

Dr. J. Frank McConnell: This discussion is one that has afforded us considerable interest and pleasure, but it possesses a wider significance, in that it shows the beginning of that co-operative spirit between the laity and the profession in the prevention of the spread of this terrible scourge. The point that we can use to considerable advantage at the present time is the persuading of the rich, that the greatest menace to them from this disease, lies in its continued spread among the poor. If this point were properly brought to the attention of the well-to-do, it would be an



easy matter to procure funds wherewith to bring about the opening up of dispensaries and the other features of the treatment of this disease so well described by Dr. Waxham. I think that those of us who have worked with Dr. Russell, in New York, in his practically pioneer work in the free dispensary treatment of tuberculosis, will agree that this work is capable of bringing about the most remarkable progress in the diffusion of knowledge in regard to this disease and in the prevention of the contagion of it to others. I remember well as a student visiting certain districts in New York, especially in Cherry street, that region commonly known as "Consumptive Block," which has had its quota of tubercular patients, and of going along and inquiring of the janitor where the sick man was, whose case had been reported to the dispensary, and the janitor saying to me: "You go up stairs, you will hear him coughing." In wending my way up three or four flights of a rickety tenement, I noticed expectoration on the walls and floors, so that one could not but be impressed with the great necessity of instructing these people. This man was found upstairs in a room that was devoid of ventilation, a blind room, depending for light and air on a shaft in the hall. He expectorated freely. In going to his work as a carpenter or journeyman, he expectorated constantly. He expectorated in going up and down stairs, leaving the other numerous inhabitants of this tenement building open to infection. It was found on inquiry that he had had a family, six or seven in number, but that during the last two or three years two or three of them died, one of brain trouble, another of bowel trouble, evidently tubercular in their nature. The scope of the work is enormous. These people can be taught to carry out instructions, and I have found time and again they would do much better than patients who had the means to employ much that was advised, and the progress made in the free dispensary treatment, as outlined by Dr. Russell, has been astonishing to the medical profession of New York, and has engaged the attention of the charity organizations to such an extent that they have published a book which has been sent out and scattered broadcast containing all these tenement districts of New York, and impressing on everyone who sees it the necessity for this great work. This topic is one worthy of considerable attention. Co-operation between the medical profession and laity in the treatment

and prevention of what is the most preventable and curable of all chronic diseases, is needed, and all of us can see the great advantage of it.

Dr. Taussig (closing the discussion): It is impossible to answer all the points that have been brought up in the discussion. The question of organizing camps in some of the cities in this country is being considered by charity organizations. A great question in considering this problem is, how much is it going to cost the community to establish and conduct such camps? If we only had the tubercular poor to handle, we would not be handicapped, but we have the poor besides the tubercular. We should not think for a moment of using charity organizations indiscriminately in dealing with this tuberculosis problem. There is one point that the medical profession, or, at least, the people throughout the United States, have lost sight of, and that is, there are a great many poor outside of the tubercular poor, and we must not treat tubercular patients who are really not poor, in trying to wipe out the disease, and forget those who are really dependent on charity. The cost of these camps is much greater than the cost of dispensaries. Feeding these patients once or twice a day is quite a cost to the community, and we must consider that phase of the subject very closely and carefully before attempting to organize a camp. There is a prejudice on the part of the public against the organization of these camps in their neighborhood. Not long ago in Chicago the Park Commissioners refused to turn over a portion of the park to one of these camps. In dealing with these movements, we need to be very careful and not attempt, because we have the means and the law back of us, to force this thing down the public's throat. We should be slow and sure.

As has been suggested, environment is a great factor in the handling of these cases. It is not altogether a question of funds, as so many believe. I believe it is largely a question of attention and care on the part of those who are meeting these people. Many of the organized charities and anti-tuberculosis societies have funds sufficient to carry on their work, but they cannot get the workers, and it is the workers we want to solve the problem, and not so much the funds.

As to the question of colleges, it seems to me that the colleges could reduce the number of cases by almost one-half in every instance.

A few cases well studied are much more advantageous to the student than a hundred cases gone over in a slipshod manner.

There is one question I wish to bring up, and that is, the sanitariums dealing with cases leaving their institutions. Cases come to the sanitariums supported by people in the East during the time they are there. After they leave the sanitarium they are considered to be charity cases, and the question arises: Should the sanitariums look after these cases after they leave the institutions? If these cases are not charity cases, it seems to me the profession is being wronged by having sanitariums look after them. They must investigate and find out whether they are true charity cases, and not remove them from the care of the medical profession; let the medical profession handle these cases themselves.

The question of the education of the laity has been thoroughly gone into in the East, and I still believe the laity should be educated as to general hygiene. Everything that pertains to general health should be gone into, but they should not be told over and over again that tuberculosis is contagious, that the sputum is contagious, and that a tubercular case is a public nuisance.

One word about Dr. Russell's work. He has done splendid work, which should be commended by the medical profession at large.

There are many other questions I would like to take up, but the time is too limited to do so.

### *A FORM OF GASTRO-INTESTINAL FEVER OF EARLY CHILD- HOOD.*

By HERBERT B. WHITNEY, M.D.,  
Denver, Colo.

Were I asked to state the two or three most common forms of prolonged febrile disturbance which I encounter among children, I should probably include "Gastric Fever"; meaning by this popular expression, in default of any better, a fever which probably has its origin in the gastro-intestinal canal and is doubtless a form of toxemia. These cases are, in my experience, so frequent, and the symptom complex is so constant in its general type and course that the condition would

seem to deserve some special name; and yet, when I speak of it to students I am quite unable to refer to any written description. The affection corresponds neither to acute indigestion, acute gastric catarrh, *status gastricus sive suburthralis* or gastro-enteric infection, as these diseases are described by various authors. Let me first attempt to give a brief account of what I mean by this gastric fever.

The disease appears oftenest in the latter period of infancy or in early childhood. Its predominant, and, indeed, in the majority of cases, only symptom is fever. This fever is of sudden onset, appears usually in children hitherto in perfect health, and rapidly reaches a considerable height, perhaps 103°-104° F. It varies greatly in duration. It may last but a few hours; probably if all of the cases were carefully recorded and analyzed it would be found that the majority continue for only two or three days. A duration of four to seven days is, however, so frequent that I have come to regard this as, in a certain degree, typical; assuredly it is very rare for this period to be exceeded. With moderate morning remissions, as in typhoid, the fever pursues a fairly even course and finally drops quite rapidly, though without crisis, to normal.

The constitutional symptoms are doubtless toxemic and vary, of course, greatly in different cases. In general, it may be said that they are usually mild and not often such as to cause alarm. Anorexia, fretfulness or a considerable degree of hebetude are naturally present in nearly all. The pulse is rapid, usually regular, and of good strength, and the respirations are accelerated in proportion to the height of the temperature.

Marked nervous disturbances are certainly not common, and yet not so rare as one could wish; they are particularly

important and disquieting because, in a large proportion of cases, tuberculous meningitis is peculiarly the *bete noir* of diagnosis. The hebetude may occasionally deepen into somnolence; there may sometimes be a very perceptible tendency to cervical retraction, a tendency, by the way, which is idiopathic with certain infants and does not necessarily mean meningitis; or, as in other forms of intoxications in infants, the scene may open with a convulsion.

Gastro-intestinal symptoms are exceedingly variable and inconsistent. They are on the one hand sufficiently common to suggest strongly the probable origin of the affection; and yet so often entirely absent as to compel at least a clinical distinction between this condition and the commoner gastro-intestinal diseases. Vomiting is only occasionally met with—never prominent or persistent. Diarrhœa is rarely present at all, certainly never continuous, while constipation or perhaps no noticeable change in the condition of the bowels is the rule. In infants, increased flatus, or an offensive odor of the stools, or a change of color in the direction of brown or greenish tints, with a lumpy appearance and general loss of smoothness, are very frequent symptoms; even here, however, there is no diarrhœa. Certainly in the majority of my cases, neither the stomach nor the bowels are sufficiently disordered to forcibly attract attention—the point which I desire especially to make. Except as to fever, pulse and respiration the physical examination is negative. The abdomen is neither unusually distended nor tender. There is no constant enlargement of the spleen. The tongue may be coated, but is not in any way characteristic. In short, we have to do, clinically, with a simple fever of probable gastro-intestinal origin and a quite definite course, but without such

local disturbances as would definitely establish its nature in the individual case.

Some will doubtless claim that the foregoing symptom-complex is not a clinical entity, but represents merely a variety of cases of mistaken diagnosis. The possibility of occasional error is freely admitted, but it must at the same time be emphatically stated that no pains have been spared in the way of careful physical examination; and in the light, also, of the full course and outcome of these cases, the writer is convinced that the apparently negative character of the signs corresponds to actual fact.

I will here report briefly the two following fairly illustrative cases recently observed:

CASE 1.—M. S., a robust bottle-fed infant of ten months, was first seen on Tuesday, February 20, 1906. On the Friday before she had vomited. On Saturday there was high fever; a physician was summoned and found on Sunday a temperature of  $104^{\circ}$ , on Monday,  $104.5^{\circ}$ . Calomel and castor oil had been given, resulting in four or five free stools. Milk had been taken but twice since Friday. On Tuesday I found the morning temperature  $102.5^{\circ}$  without cough or disturbance of respiration. The only history to be obtained was of fever, irritability and more or less anorexia. The general condition was excellent and the physical examination, including the ears, was wholly negative. Salol was ordered and the diet was limited to broth and barley. In the afternoon the temperature was  $104.2^{\circ}$ , pulse regular, examination negative.

FEBRUARY 22: Both morning and evening temperatures  $104^{\circ}$ , pulse 150, respirations somewhat accelerated, but the child cries long and without difficulty and the lungs are negative on examination. Abdomen apparently slightly ten-



der though soft and not distended. Slight constipation since first seen and castor oil given last night resulted in two unoffensive stools.

FEBRUARY 23: Temperature fallen to  $100.5^{\circ}$  and did not rise again. Recovery rapid and uneventful.

CASE 11. Baby N., a well-nourished bottle-fed infant was first seen on Friday, May 4, 1906. About one week ago there had been a temperature of  $103.5^{\circ}$  for one day, but the child has been well since until about three this morning, when it awoke feverish and fretful. At 10 a. m. I found him with temperature  $102^{\circ}$  and pulse 138. There had been no vomiting, only slight cough, and one small scybalous stool. The child looked pale, but a careful examination of throat, ears, lungs and abdomen was negative. Calomel and the usual diet was ordered with phenacetine at night.

On Saturday, May 5th, the evening temperature was  $103.5^{\circ}$ , pulse, 200. The calomel had produced two slimy, dark-greenish-brown, very offensive stools, and considerable gas had passed during the day. Abdomen and ears negative. Salicylate of bismuth, with small doses of resorcin, was ordered.

MAY 6: Morning temperature  $101^{\circ}$ , evening  $103$ , pulse 150. One small, semi-solid, odorless stool during the night. The child plays on the floor and appears happy and comfortable. Cough is very slight and infrequent.

MAY 7: Afternoon temperature  $102.8^{\circ}$ , pulse 150. Slept all night and took food well through the day. One dark, unoffensive stool followed a suppository—smooth and without much gas.

MAY 8: Evening temperature  $101^{\circ}$ , general condition still better, one stool like that of yesterday. I did not think it necessary to see the case again, and I afterwards learned from the mother that recovery was uneventful.

It will be observed that the differences

between this form of fever and the commoner gastro-intestinal disorders consist largely in the absence of local symptoms. Acute gastric indigestion is characterized chiefly by vomiting; there may be high fever and severe constitutional symptoms, but they usually cease in a day or two, or at least as soon as the alimentary canal is empty. Still more severe and persistent is the vomiting of acute gastritis, and the duration of the fever is in direct proportion to the continued intolerance of the stomach. In acute intestinal indigestion, as usually described, diarrhœa is the symptom of central interest and importance. Still more is this true of the various forms of gastro-intestinal infection, from the milder types with frequent flatulent and offensive discharges, to the characteristic stools of cholera-infantum. In cases like those cited above we are certainly dealing with an affection which bears little resemblance to any of the gastro-intestinal disorders commonly described.

Complications have been hitherto rare in my experience, and it is only during the last year that a series of such has lead me to feel that gastro-intestinal disturbances in children attended with high fever are by no means free from danger. I shall report these cases in full at another time, and will here do scarcely more than to indicate the nature of the complication. In one case, aged fifteen months, a most typical course of seven days' duration ended by a critical drop to nearly normal. On the next day a marked chill was followed by a rise to  $105^{\circ}$ . This high temperature continued for ten days and proved to be due to an acute pyelitis from which there was full recovery. In a second case, aged ten months, the course of the primary affection was also very characteristic for about one week, then a peritonitis developed, which resulted a few days later in death. A third case, in a child of two years, was atypical from

the start—an irregular fever accompanied by infrequent but offensive stools. At the end of about ten days a right-sided pleuritic effusion suddenly appeared and became rapidly purulent so as to necessitate drainage. This was followed in two or three days by a similar condition upon the left, to which the child succumbed after a total illness of some two and one-half weeks. The inflammatory complication in the latter case was streptococcic; in the first two, no bacteriological examination was made. Finally, a fourth case, eleven months old, was first seen December 16, 1905. There was a steady high fever without other important symptoms until about the 21st, when the temperature fell to normal. On the next day it was again high, and on the following day an erysipelas appeared which gradually extended over a considerable portion of the head. This case ended in recovery.

The diagnosis of this affection must be almost wholly by exclusion. The gastro-intestinal symptoms referred to are often so slight that even when thoroughly investigated and carefully weighed they are inconclusive; they might well result from the fever itself or from some independent infection. I know of no condition the recognition of which presupposes more care or greater surety in physical examination than this gastro-intestinal toxemia. The throat is, as a rule, easily disposed of; certainly on the second day a careful inspection would eliminate acute pharyngeal disease and scarlet fever. The ears will give greater trouble because of the frequent difficulties of examination. An otitis is likely to cause more crying and actual pain, and there may be other suggestions of local disease; but too frequently fever is the only symptom of even a severe otitis, and as a rule inspection of the drum is the only safe guide. The writer has, therefore, found it necessary to familiarize himself with aural ex-

amination, and to have the proper instruments in constant readiness. Typhoid fever is another condition which these gastro-intestinal cases constantly suggest, and which the tender age of the patients no longer permits us to exclude. Time and careful observation alone will make it possible to do this, the main factors being, of course, the undue persistence of the fever, the appearance of rose spots, enlarged spleen, or the Widal reaction.

The two diseases which are most difficult to eliminate, are pneumonia and tuberculous meningitis. The former is easily recognized when the symptoms are typical; unfortunately many cases in early childhood are extremely irregular, and may be entirely devoid of the usual symptoms which suggest pulmonary disease. A recent case will illustrate this variety: A child of fifteen months had been feverish for twenty-four hours before I was asked to see it. I discovered an unquestionable consolidation of the right upper lobe posteriorly, although there was no cough and no increased respiratory frequency beyond what a temperature of  $103^{\circ}$  would satisfactorily explain. For six days there was a daily evening rise to  $102^{\circ}$ - $104^{\circ}$  F., while in the morning the temperature was at times normal. Cough was practically lacking throughout, and for the most part the child was bright and playful—almost a complete euphoria. There was no perceptible dyspnea and the appetite was apparently unimpaired, yet the consolidation was unquestionable—with dulness and especially intense bronchial respiration over almost an entire lobe. On the seventh day the temperature fell to normal and the child remained well. The parents of this child had never been convinced that it had pneumonia, and they are perhaps hardly to be blamed for their skepticism.

Pneumonia in children is certainly at times a very mild affection; and when we

also remember that even the physical signs are sometimes very slow to appear—occasionally as late as the fourth or fifth day—the necessity is emphasized of great caution in diagnosis, and especially of repeated careful search for the evidences of consolidation in every case of continued high temperature.

I know of no way in which the ever-present spectre of tuberculous meningitis can be banished in gastro-intestinal fever until recovery is assured. This refers chiefly to those cases where gastro-intestinal symptoms are few or entirely lacking. Especially if there be constipation, or if the child be delicate and of tuberculous antecedents, one's anxiety will be proportionately great. It is unnecessary here to enumerate the early symptoms of a typical case of tuberculous meningitis: they are familiar to us all and I need not insist upon the fact that most cases give more or less definite early indications as to their true character. I wish here to call attention only to those more exceptional varieties which begin abruptly in apparently healthy children, and which for a time show little else than fever. This fever, too, is not necessarily irregular, and may even strongly suggest typhoid. Two illustrative cases recently seen may be briefly mentioned: On July 2nd, last, I was asked to see a bright, fat and healthy-looking child of eight months, in the absence of the regular attendant. It appeared that for seven days the child had had a daily fever, and a physician had been called at the onset because of this. He had ascribed the illness to teething, attendance was not continued, the fears of the youthful parents were assuaged, and since the child seemed otherwise perfectly well, nothing further was done until finally the persistence of the fever began to cause fresh alarm and I was summoned. Though I found a temperature of  $103^{\circ}$ , all other suggestive fea-

tures were wholly lacking; and while rendered cautious by the duration of the fever, I was inclined to consider it gastro-intestinal. I learned afterward from the family physician that three days later the child became somnolent and finally died of tuberculous meningitis. A second case, Nora S., aged four, was brought to my office on Saturday, June 28, 1905. The child was said to have been dumpy and disinclined to play for a month, and for the past week to have been feverish. There had been no vomiting, constipation, headache, cephalic cry, or loss of flesh—simply a general indisposition. I found a rectal temperature of  $102^{\circ}$ , but otherwise nothing of importance; the good color and plump condition of the child were particularly noticeable. For six days this child presented nothing abnormal except a steady fever, varying in the afternoon from  $101^{\circ}$  to  $102^{\circ}$  by rectum. On Wednesday, February 1st, there was considerable stupor, but it was not until the 3rd that an irregularity of the pulse and a slightly Cheyne-Stokes respiration established the diagnosis of tuberculous meningitis, to which the child soon succumbed. For the first six days I was in spite of the absence of rose spots and enlarged spleen.

These two cases illustrate the great need of caution in diagnosis whenever a child has an otherwise inexplicable fever of more than a very few days' duration. It is a pity to cause such consternation in a family as does the mere mention of tuberculous meningitis, but to suggest it as a possibility in these cases seems to me the only safe plan. Parents are never so vindictive as when, under these very conditions, their fears have been lulled, only to be later suddenly awakened to the certitude of an incurable disease. In this connection I would emphasize the great importance of an irregularity of the pulse as one of the possibly very early symp-



toms of tuberculous meningitis; of special significance is a variation in rate, so that for a certain number of beats the pulse, though regular, is definitely slowed. This change is quite independent of the respiratory phases, the effect of which must often be carefully eliminated. Henoch was the first to impress me with the importance of this symptom, and now, twenty years later, I can personally testify to its great value. Gastro-intestinal disturbances may also, it is said, exceptionally cause an irregular pulse; the sign is not, therefore, pathognomonic, but its presence must always make the scale dip low in favor of meningitis.

As to the cause of this gastro-intestinal fever, I can add nothing to what has been so often said about gastro-intestinal toxemia. It is to be noted, however, that these cases are commonest after early infancy—from perhaps the first to the fifth year; that they are quite as frequent in winter as in summer; and that they are not usually associated with any gross error in diet. My impression has always been that they are due to some defect in the milk; and yet they occur quite as often in my best families, where great care is taken in regard to food and dairy, as among the poorer and more negligent classes. Certainly the tendency to these attacks becomes less as children get older, and as milk comes to form a less important part of the diet. Whether of bacterial origin, or simply a disturbance of chemismus, the occasional offensive and flatulent stools point to some process which is still, perhaps, best described as fermentative, with resulting intoxication.

The treatment, therefore, differs little from that of the more distinctly gastro-intestinal infections. Milk is immediately withdrawn and broths, with barley water, are substituted. Occasionally, a single preliminary washing of the stomach is useful. The bowels are at once

cleaned by castor oil or calomel, followed for two or three days by 1-10 grain doses of the latter every two hours. Later one may give small and frequent doses of salol, or bismuth salicylate, or eudoxin or any other "intestinal antiseptic" in which confidence is felt. My own preference is for the subgallate or salicylate of bismuth.

Phenacetin, at night, if the child is restless from high fever, is, I believe, harmless and conducive to increased comfort. During the day the fever need not, as a rule, be vigorously fought, though often lukewarm or even cooler spongings are of benefit if complacently borne. Diet is the all-important factor in treatment.

#### Discussion.

Dr. Will H. Swan: I think we are very much indebted to Dr. Whitney for his description of these cases, which, I believe, occur with very much greater frequency than we have imagined heretofore or believed, and which have bothered us very much as to diagnosis.

It has been my fortune to have seen quite recently two cases of the same character. One of them is a child, two and a half years of age, with a tubercular family history, the mother having died of tuberculosis, and the father being at that time quite ill with active tuberculosis. The child was taken with vomiting and fever, followed shortly after by a mild convulsion, with retraction of the head and irregular pupils. The symptoms persisting, and the gastro-intestinal symptoms having subsided, we felt at the end of three or four days that the child had tubercular meningitis. We felt that the diagnosis of meningitis was pretty well established. However, at the end of four or five days the child was seen by Dr. Hershey, of this city, who was a little more careful in making a diagnosis than we had been, and expressed some doubt as to the existence of tubercular meningitis. In the course of ten days the child recovered and has been well ever since.

The other case was a child a little less than three years of age, who vomited once at a time when it was digesting perfectly well. It had a good deal of fever, the temperature going to 105 degrees, when it was seen by Dr. Gardner in my absence. The high temperature per-

sisted for two or three days. There was rapid respiration. There were no other symptoms except the child was rather somnolent and seemed ill. The bowels were cleared with calomel and castor oil. The child had three or four rather offensive stools, but otherwise there was nothing suggestive. The fever lasted for a week. It came down gradually, and the child had no particular symptoms except on the third or fourth day, when there developed clinically an erythema nodosum. The child had large nodules on both shins and thighs and on the forearms. This latter lesion gave apparently no discomfort or trouble, and gradually cleared up, and the child has been well ever since.

The description of the latter case by the parents to Dr. Gardner, who saw the child early, was much like a child coming down with a pneumonia, and in the absence of anything else manifesting itself, and the development of the skin lesion, I think undoubtedly it was one of those cases of gastro-intestinal toxemia, of which Dr. Whitney has spoken.

Dr. F. Singer: I have seen several cases which have exhibited the subjective symptoms referred to by Dr. Whitney, and in connection with which I have observed some cases in which there seemed to be emaciation following, due to the fact that liquids were not absorbed by the patient. In some of them the emaciation became very extreme, and as a method of treatment I conceived the scheme of using saline solutions by hypodermoclysis, with excellent results. I have used the same method in some of my typhoid fever cases where I have had marked emaciation following inability to take food or liquids to deal with, and I must say that I have used this method with splendid results. It produced prompt assimilation in these cases.

Dr. Oscar M. Gilbert: I was in hopes that Dr. Whitney would touch on a form of ileocolic infection which we have been having in Boulder for the last three summers. It so happened in the early part of the summer of 1904 that several of our foremost men were discussing the subject of ileo-colitis, and all agreed that there was practically no fear of ileo-colitis in this altitude in previously healthy children. We had then one case on hand, which brought about a discussion. About that time children began to die. We had several cases which seemed about the same as cases of ileo-colitis do ordinarily, only the disease was a little more persistent. Children in the second year, or two years of age, would be taken very much

as with a gastro-intestinal intoxication, and probably forty per cent. of them would have convulsions in the first twelve or fifteen hours; but within twenty-four to thirty-six hours all the severe symptoms would become very much ameliorated, and we would all be deceived in thinking that the child was out of danger. At the end of four to seven days there would begin apparently a most septic condition of the stools; in the meantime stools being reduced to six or eight a day. The bulk of the fluid would pass away, but pus was more common. Then the child would begin to collapse within twenty-four to thirty-six hours, in spite of all restorative and sustaining measures, go right down and die. There seemed to be something of an endemic nature connected with this affection, in the narrower sense, confined to small localities. Of five children within one block, for instance, four died. Of three children in one house, all died. The mortality in general was considerably over fifty per cent. Toward the last of the season it tapered off. We have not seen anything like it in that part of the country since, and text-books throw very little light on the subject. It does not correspond to the severe forms in the country in general, and clinicians do not lead us to believe that it is exactly this type of ileocolitis we have seen in Eastern clinics, and clinicians do not expect such a form of ileocolitis.

Probably I do not emphasize enough the point that this case did not appear to be very ill after the first twenty-four hours. The pulse did not exceed 112 to 120 in an infant one or two years old. The heart sounds were good and clear. There was no distention of the abdomen; and the temperature was only slightly elevated, sometimes not at all. The pulse and temperature forty-eight hours before the fatal collapse began were normal. Some of us thought it was probably a different infection from what we had had, or that it was simply a different form of the ordinary ileo-colitis.

I would like to hear from some of the other members as to the presence of this infection, and if they can throw any light on it.

Dr. J. E. Bedford Stubbs: I was much pleased to hear Dr. Whitney's paper. He gave us a much better picture than I gave of an epidemic I saw in Iowa in 1896, which occurred in the neighborhood in which I was practicing. I saw fifteen cases, and I think the doctor will bear me out in saying that unless you took the child's temperature you would not think it had much fever. The child looked



all right, and you would not expect from its appearance that it had the high temperature it did. They would lie quiet. I tried a number of treatments and could not relieve these little patients under seven days. In the epidemic I saw most of them recovered without complications. The best description I have found of these cases is given in Hughes' Practice, a small compend, under the title of "Catarrhal Fever."

Dr. E. P. Gengenbach: I wish to emphasize the point that we should endeavor to differentiate these cases from ordinary cases of acute indigestion or gastro-intestinal disturbance. In these cases where we have manifestations of gastro-intestinal disturbances and relieve the stomach and the intestines of the offending material, we still have fever, and that has been a puzzle to me, and for that reason Dr. Whitney's paper impressed me very much. We all know that in ordinary cases of gastro-intestinal indigestion, as soon as we clean out the alimentary canal thoroughly, the symptoms are relieved, including the disappearance of fever. On the other hand, in these cases of gastric fever the fever continues, and very often is puzzling because we cannot help but wonder what causes the fever to continue, and until we begin to think of many of the diseases of children and are able to eliminate them, we cannot find the cause. When we have found the cause our minds are relieved.

Dr. George A. Boyd: I would like to ask Dr. Whitney if he thinks the gastric mucous membrane is always involved in these cases? If I followed the doctor correctly, I do not see in the symptoms-complex any indication of the stomach being involved. I think that ought to be brought out. We know that in many instances the stomach is saved from the infections which involve the small intestine and colon.

Dr. Whitney (closing the discussion): I do not think that the mucous membrane of the stomach or intestine is involved in these cases. It is my idea that it is, more or less, a pure toxemia. In my cases I have never seen any symptoms which would suggest a catarrhal inflammation of the intestinal mucous membrane.

In discussing these cases with parents, I generally prefer to use the term gastric fever. If I should say gastro-intestinal intoxication, they would not understand what that means; but they are familiar, more or less, with the term gastric fever. So it is a great convenience, therefore, to say to the parents or friends that we are dealing simply with a case of gas-

tric fever; that satisfies them as well as typhoid fever, or any other known clinical entity.

I have seen dozens of these cases every year. It is a matter of very great importance to those who practice among children to know that there is such a continued fever of five or six days' duration, which may be very high, and which is not of very serious import, barring, of course, possible complications to which I have referred. It makes an enormous difference to you and me, when we see such cases, whether or not we know what we are dealing with; whether it is a disease having a typical course and about which we can give a fairly certain prognosis to the parents. If I did not know there was such a condition as gastro-intestinal toxemia and met with such a case tomorrow, I should be greatly worried as to the course the disease was going to pursue, and as to its possible duration and outcome. As it is, I always suspect this condition when at the end of twenty-four to forty-eight hours physical diminution is negative, and though I am always guarded in prognosis, yet I am rarely at fault in the bold assurance I usually give of a probable definite duration and favorable result.

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It is stated that strong coffee, hot, will quickly overcome uterine inertia, if drunk freely.

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Canadian Hemp (*Apocynum Cannabinum*) is highly recommended by Duprey for its diuretic effect. The tincture is used in increasing doses to 10 minims three times daily.

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In cases of chronic appendicitis, if an examination be conducted with the patient in a hot bath (150° F.), the thickened appendix may often be felt to roll under the finger.—*American Journal of Surgery*.

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The American Climatological Association will hold its twenty-fourth annual meeting in Washington, D. C., beginning May 7th, according to the preliminary program issued. Over twenty titles are announced from diverse sources.



# Progress of Medicine

## INTERNAL MEDICINE.

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Boulder, Colorado.

## ARTHRITISMUS AND TUBERCULOUS INFLAMMATION.

At a recent meeting of the Paris Académie de Médecine, A. Poucet and Sariche discussed chronic arthritis and showed that many so-called cases of arthritis were neither more nor less than tuberculous inflammation of the joints, a local mild tuberculosis causing a fibrous form of arthritis, running usually a very prolonged course, but gradually rendering the subject immune to more virulent tuberculous infection, and that the frequent skin eruptions are often the result of mild tuberculous infection. (*Munch. Med. Wochenschr.*, No. 9, 1907.)

[In view of a recent clinical experience in my own practice, this discussion impresses me as being one of great importance. A young woman about 25 years of age came under my care, with a clinical history that seemed to warrant the diagnosis, arthritis deformans, a diagnosis concurred in by at least one other physician and my prognosis was that ultimately she would become an helpless invalid. She was given tonics, potassium iodide, etc., with some improvement, which was temporary.

After three to four years' treatment she is now better, now worse, but on the whole, much worse; I decided to test her with tuberculin and obtained a typical reaction at one milligram. She was then given the "tuberculin cure" with the most satisfying results, and at present writing the former troublesome joints seem perfectly well.—Ed.] W. J. B.

## SEGREGATION OF URINE BY MEANS OF KIDNEY MASSAGE.

David M. Cowie (*American Medicine*, January, 1907) tried this method, which was originated by Giordano, a Venetian surgeon, on a case of tuberculosis of the kidneys, with satisfactory results.

The patient, a student at Ann Arbor, was suspected of having renal tuberculosis from the symptoms and the finding of pus in the urine, which was made up largely of mononuclear leucocytes and later tubercle bacilli were found in the urine.

Procedure:—The bladder was washed with sterile water until perfectly clear, the patient was then turned on his right side and the left kidney thoroughly massaged through the abdominal wall for five minutes, a catheter then introduced and no urine flowed, but 125 c.c. of water brought away a turbid fluid which contained numerous tubercle bacilli and mononuclear leucocytes; the same procedure on the other kidney brought clear fluid.

Operation proved the left kidney to be tuberculous.

O. M. G.

## PNEUMONIA.

The following are some of the observations of Robert B. Preble (*Progressive Medicine*, March 1, 1907) from a study of the year's literature on pneumonia:

*Blood.*—Pneumococci are always present in the blood, thereby stamping it as a septicemia—usually, but not always, with local invasion of the lungs. They are found in the blood for several days after the crisis and appear to be as virulent to susceptible animals as before the crisis. They have also been found in the myocardium.

*Viability.*—They live an average of eleven days in dark room at room temperature, but only a few hours in sunlight

and only four or five days in airy room without direct sunlight.

*Intrauterine Pneumonia.*—One case reported in which the mother aborted on third day of pneumonia and fetus had definite lobar pneumonia proven by autopsy.

*Knee Jerk.*—Barnes attempts to show that loss of knee jerk is of importance as a positive diagnostic sign of true pneumococcus pneumonia and that its early disappearance is of grave prognostic significance. The author doubts this, as it may occur in any severe infectious malady.

*Tachycardia in Apical Pneumonia.*—This relationship is emphasized. It is possibly due to the irritation of the accelerator fibers of the sympathetic, rather than paralysis of the pneumogastric. Cerebral symptoms were also common in apical cases, probably due to interference with the return circulation, through the jugulars interfering with the nutrition of the brain and rendering it more susceptible to the action of the toxins.

*Gangrene.*—Gangrene of both legs were reported, proven at autopsy to be due to embolism of both femorals.

The source of the emboli was not found; no endocarditis was found; but, it is possible, in the course of any severe infection with a weak heart, to have clots form among the trabeculæ of the left ventricle. The usual cause, however, is endocardial vegetations.

*Double Empyema.*—Fifty-seven cases were collected, 90 per cent. in children; some were treated by repeated puncture, others by incision; most all recovered, but one case was followed by chorea.

*Treatment.*—The author holds it as a matter for serious regret that nothing of great importance has been added to the treatment. He rather discredits Galbraith's quinin and iron treatment, as well as that by creasote derivatives.

The experience with pneumococcus sera

is yet insufficient to base definite opinions, but the outlook does not seem very encouraging, although both Tartaro and Winckleman have reported decided amelioration of symptoms from its use.

*Fresh Air Treatment.*—Perhaps the most rational claims are for the fresh air treatment. Anders is particularly enthusiastic over it. The patients are either treated on protected verandas or with windows wide open, regardless of the lowness of the atmospheric temperature. The fever is lowered, the heart and vascular system improves, the tongue tends to clear, delirium is less, the patient is more comfortable, sleeps better and is in no danger of taking cold. One author reports a desperate case in an alcoholic, in which the room temperature was below zero, his rule was "Nothing between the patient's nose and the North Pole." The case recovered. The greatest drawback is the discomfort to the nurse. O. M. G.

#### CALCIUM SALTS AS CARDIAC TONIC IN PNEUMONIA AND HEART DISEASE.

Sir Lauder Brunton (*British Medical Journal*, March 16, 1907) mentions Dr. Sidney Ringers' experiment of perfusing a frog's heart with solution of sodium chloride in distilled water, upon which contraction soon ceased, but when the solution was made with tap water the contractions continued for a much longer period. His scientific acumen led him to suspect that it was the calcium chloride in the tap water which made the difference and further experiment proved this to be the case.

Brunton was, therefore, led to try calcium salts in threatening cardiac failure from pneumonia and heart disease, and is very enthusiastic over the result. In pneumonia he uses the chloride on account of its more rapid action, but in cardiac disease often uses the lacto-phosphate or glycerophosphate. He gives from 5 to 10 grains every three hours, dissolved in

water and sweetened with 1-20 grain of saccharine to the dose, as the taste is otherwise very disagreeable. It can only be kept in solution on account of its deliquescence. He thinks the benefit of the milk diet in these cases may be due to the large amount of calcium salts contained in milk. O. M. G.

### SURGERY.

EDITED BY

Albert Silverstein, M. D.,  
Denver, Colorado.

#### PRELIMINARY NOTE ON THE DIRECT TRANSFUSION OF BLOOD

In Pernicious Anemia, Leukemia, Carcinoma, Chronic Suppuration, Surgical Hemorrhage, Pathologic Hemorrhage, Tuberculosis, Surgical Shock and the Transference of Immune or Protective Bodies in Self-Limited Diseases, Illuminating Gas Poisoning, Bleeding and Transfusion in Toxemia and Drug Poisoning.

In this interesting preliminary report, Crile summarizes his notes as follows:

The therapeutic results may be grouped into three classes: Positive, negative and undetermined. Among the positive results is transfusion in acute hemorrhage, which is apparently final. In pathologic hemorrhage it has proved positive in improving the patient's immediate condition and in most instances wholly controlled the hemorrhage itself. In shock its value seems far greater than any other remedy hitherto employed. From the experimental standpoint it seems to be the most effective treatment of illuminating gas poisoning.

Among the negative results are transfusion in pernicious anemia, leukemia, carcinoma, strychnin poisoning and diphtheria toxemia.

Among the undetermined results may be mentioned chronic suppuration with its attendant debility and anemia, tuberculosis and the acute self-limited infectious diseases.

Of the seventeen clinical cases, all were technically successful. In every instance

the donee experienced a heightened vitality, and in the absence of serious organic disease the patient became buoyant, even jocose. Some had chills during transfusion, or soon after, and a majority showed some febrile reaction later. In the case of serious disease, such as suppuration, pernicious anemia, leukemia, the improvement in the blood picture was not maintained, as in patients having no serious disease or infection.—*Cleveland Medical Journal*, March, 1907.

#### THE IMMEDIATE CORRECTION OF CONGENITAL CLUB-FOOT.

Edwin W. Ryerson states that congenital talipes equino-varus never gets well without treatment, and many cases fail to get well in spite of treatment. One of the greatest difficulties in the path of the orthopedic surgeon is the fact that many practitioners advise delay in treatment until the children are older or stronger. This is obviously absurd, as every gain in age or strength means just so much more difficulty in correcting and curing the deformity. Early treatment will prevent bony changes, and it is far easier to prevent body deformities than it is to cure them. A baby three weeks old is none too young to undergo a forcible straightening, with tenotomy, if indicated, and with prolonged retention in plaster of Paris. He divides the forms of club-foot at birth into two classes, the flexible and the rigid.

Flexible club-feet are those which can be over-corrected manually without an anesthetic and without the use of extreme force. If the heel can be brought down beyond a right angle and the outer border of the foot can be raised above a right angle, with the toes fully extended towards the knee, and a plaster cast be applied in this position, a cure can be expected in a few months.

Rigid club-feet cannot be immediately corrected without anesthesia. In treat-



ing this class, the foot is forcibly over-corrected, doing whatever tenotomies are necessary; the plaster of Paris cast is applied from the thigh downward, the knee being bent at a right angle, and the cast covering the extended toes. Care must be exercised to prevent undue pressure over the dorsum of the foot. The cast is retained for two months, when it is removed; subsequent treatment is not often necessary, but may consist in the application of a light cast or a Taylor brace worn for two or three months.—*Amer. Journ. Surg.*, March, 1907.

#### GYNECOLOGY AND ABDOMINAL SURGERY.

EDITED BY

Carey K. Fleming, M. D.,

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Denver and Gross College of Medicine.

#### THE MANAGEMENT OF LAPAROTOMY PATIENTS AND THEIR MODIFIED AFTER-TREATMENT.

In an interesting article on the above subject, Boldt (*New York Medical Journal*) strongly endorses the advice given by Ries, 1899, relative to the early rising of patients after abdominal operations. He says, "Of their own accord, patients seldom care to get out of bed until the third or fourth day, but it has been my custom to help them, in all simple cases, out of bed within twenty-four hours and have them sit in a comfortable chair, and to coax them out subsequently as much as possible. Occasionally I have done abdominal hysterectomies for fibroids, pan-hysterectomies for purulent inflammatory conditions, ovarian tumor operations, etc., in the morning, and have had my patients out of bed in a rocking chair late in the afternoon of the same day. By the end of the fourth or fifth day, the patients after uncomplicated abdominal sections usually walk about as though they had no operation done upon them."

"Exceptions to the inducement of early rising, that is within twenty-four to forty-eight hours, are made when a patient's

physical condition has been much weakened by illness prior to the operation or when the patient's pulse rate is much above normal, or when the nature of the operation has been one of unusual magnitude."

He concludes his very interesting paper as follows:

"No particular preparatory treatment is necessary for patients upon whom it is intended to do an abdominal operation, unless the operation involved the opening of the stomach or the bowels.

Stomach lavage is of benefit at the conclusion of the operation.

Patients should not be kept unnecessarily under an anesthetic.

The application of a tight bandage around the upper part of the thighs, to keep a blood reservoir in the lower extremities, in exsanguinated and very weak patients is excellent. The same may in exceptional cases be done with one of the upper extremities. These bandages are taken off as soon as the operation has been completed, and thus more blood is thrown into the trunk.

The administration of strychnine during and after an operation should be used with more care than is usually done.

The intravenous infusion of a .9 per cent. saline solution should not be too long delayed when the condition of the patient makes it evident that its employment may be of benefit. In instances of large myomata, where the patient has been much exsanguinated by bleeding, it is desirable that the infusion be begun as soon as the patient is fully under an anesthetic, so that by the time the operation has been completed, about 1,000 to 1,500 c.c. may have been infused.

The application of a very simple dressing over the wound, and the adjustment of a snugly fitting Scultetus bandage made of oxide of zinc plaster.

The administration of a dose of morphine in restlessness or pain makes this

desirable, the medication then, clinically, acting as a heart stimulant.

The allowing of regular diet and unrestricted mobility within twenty-four hours after the operation, unless specially contraindicated.

The getting patients out of bed as soon as possible after an operation.

The avoidance of forced catharsis before the first four or five days after an operation unless there is a special indication for it.

In instances where resort to vaginal drainage is had, or where it is evident that there will be some secretions intraperitoneally after an operation (purulent cases, and oozing from torn adhesions), the employment of trunk elevation as soon as the patient is put into bed. For this the employment of a bed-lifter such as described, or the placing of high blocks or chairs under the head of the bed, is preferable to back rests."

In a recent number of *Surgery, Gynecology and Obstetrics*, Noble says "Frequent urination and persistent pyuria, with acid urine is a combination of signs which should always raise the suspicion of tuberculosis of the kidneys."

#### OPHTHALMOLOGY.

EDITED BY

E. W. Stevens, M. D.,  
Denver, Colorado.

#### THE TREATMENT OF GONOCOCCIC CONJUNCTIVITIS WITH SPECIAL REFERENCE TO THE SILVER SALTS.

G. E. de Schweinitz, in a clinical lecture at the hospital of the University of Pennsylvania (*Therapeutic Gazette*, January, 1907) describes his method of treating purulent conjunctivitis caused by entrance of the gonococcus into the conjunctival sac.

In the gonococcic conjunctivitis of adults, iced compresses are advised during the first thirty-six hours, provided the

patient is robust and the cornea is not involved. As a cleansing agent for removing the pus, a saturated solution of boric acid is recommended as satisfactory and safe. Great care should be exercised when making applications that no bruising or scratching of the cornea shall take place. The elimination of the pus should be aided by keeping the conjunctival sac constantly flooded in a 25 per cent. solution of argyrol. Professor de Schweinitz is convinced that argyrol has no specific value in the treatment of the gonococcic conjunctivitis of adults, and never should be relied upon as a substitute for nitrate of silver. When used in the above manner, however, he believes it has a certain value, owing to its power of diffusing itself, of penetrating all of the crevices of the inflamed folds of the conjunctiva, which it coats, and of floating the pus and mucus to the surface, from which it can be readily removed. Protargol he has ceased to use in the treatment of the disease.

At least once daily a 2 per cent. solution of nitrate of silver is applied in the following manner: The conjunctival sac is first thoroughly irrigated and all pus and lymph carefully washed away. Next, both lids are everted so as to obtain full exposure of the swollen tarsal conjunctiva. With a small cotton mop the exposed conjunctiva is then gently but thoroughly painted with the solution of nitrate of silver until a white film due to the formation of chloride of silver and coagulated albumen, forms. With a physiologic salt solution the exposed conjunctiva is next irrigated until every particle of the white film is washed away, and a clean red surface remains. The lids are then restored to their normal position and the sac once more irrigated. The nitrate of silver solution should never be dropped into the conjunctival sac. When carelessly used, or imperfect-

ly neutralized, or applied in too strong a solution, it is liable to do harm. In a certain number of cases no improvement will be observed under the above treatment, and then solutions of permanganate of potassium should also be employed. The permanganate of potash in a solution of 1 to 2,000 to 1 to 5,000 should be used copiously, a pint at a time, in continuous irrigation, three or four times a day. Always, if there is a swollen ring of chemotic conjunctiva surrounding the cornea, this should be deeply and thoroughly scarified. Atropin drops should be used in order to keep the pupil dilated from the very start, and to lessen the tendency to hyperæmia of the uveal tract. Internally, the patients should have opiates, if required, and supporting measures if they are depressed and anæmic.

In the treatment of ophthalmia neonatorum de Schweinitz rarely uses cold applications, and then only in cases with much swollen lids and of robust nature when cold compresses are applied for the first twenty-four hours. Painstaking but gentle irrigation of the conjunctiva with a saturated solution of boric acid for cleansing purposes is combined with constant flooding of the sac with a 25 per cent. solution of argyrol, which acts as a protective, and which floats to the surface the purulent discharge, rendering its removal more easy.

Many cases of ophthalmia neonatorum do well under this treatment, but the case should be carefully watched, and provided the symptoms do not promptly subside, there should be added to the treatment a daily application of nitrate of silver in the manner already described.

E. W. S.

## EAR, NOSE AND THROAT.

EDITED BY

Wm. C. Bane, M. D.,

Professor of Otology, Denver and Gross College of Medicine.

C. E. Cooper, M. D.,

Denver, Colorado.

### THE BLOOD-CLOT METHOD OF WOUND REPAIR IN AURAL SURGERY.

Frank B. Sprague (*The Laryngoscope*, September, 1906) refers to the recognition of the blood-clot method of healing wounds in general surgery, and that it is in the experimental stage in the treatment of mastoid wounds. He first applied the method in 1892, and met with marked success.

Two methods of using the blood-clot are given: First, the closed method, and second, the drain method in which a gauze wick is inserted for half an inch or so into the cavity. A complicating condition in mastoid wounds is the pyogenic infection from the antrum at the bottom of the wound.

The principle of the blood-clot treatment of mastoid wounds is the same as that applied in general surgery, that is, the removal of all diseased tissue and bone; the irrigation with normal salt solution; allowing the cavity to fill with blood, and then bringing the periosteum and soft parts together for primary union. The importance of asepsis is emphasized. Also the guarding against sepsis at the first and subsequent dressings.

The first step in the operation is a free incision of the drumhead, the cleansing of the middle ear of septic material, and providing for free drainage of the tympanum. In operating, "all unnecessary bruising of the soft parts should be avoided." Thorough removal of diseased tissue, then the curetting of the antrum and auditus. Irrigate with normal salt solu-



tion, avoiding irritating chemicals. Allow the cavity to fill with a clot and then close over by replacing the soft parts by subcutaneous wire or silk-worm gut suture. Change the gauze in the canal after the wound is closed. Change the dressing on the third day. Insert new wick in the canal and change it in one or two days. If the wound shows local redness and swelling, open, with probe, at the point only, and wipe out, but do not irrigate. If serum, allow wound to close. If pus, insert a gauze wick for drainage. If at operation it seems unwise to close, leave a bit of wick between a stitch loop. Cleanse serum by mopping with cotton on carrier, but do not irrigate. If pus, irrigate with normal salt solution, not bichloride. Omit drain as early as possible. When intra-cranial complications are present, the bone opening is packed to heal by granulation.

Of 186 operations on acute cases, 129 were treated by the blood-clot methods. The other 57 healed by granulation. Sixty cases healed in from twelve to twenty-eight days by the drain method. In 69 cases the blood-clot method was used, "and 42 of them healed without interruption in from seven to fifteen days. In the radical operation the blood-clot treatment was manifestly not satisfactory.

Of the 186 acute cases, only 64 per cent. were favorable for blood-clot healing, "54 per cent. for the typical and 10 per cent. for the drain method." Of the 54 per cent. considered proper cases for the typical method, 68 per cent. were successful, being healed in from seven to fifteen days, and the remaining 32 per cent., while not perfect successes, were healed in eighteen days and less." The time of healing was greatly shortened by the blood-clot method, and the scar not noticeable.

"Naturally, the blood-clot healing is not to be thought of in acute infectious

diseases, or in tuberculosis, diabetes or chronic constitutional ailments."

"In primary acute cases, if the staphylococcus is present, it has always broken down and suppurated. If streptococcus is present in pure culture, and operation is demanded before opsonic index of the blood is sufficiently high to resist the infection, or nature has not had time to throw up her fortifications around the local process, the blood-clot should not be attempted; as not only the clot becomes infected, but the virulence of the organism is so great that the whole wound suffers more or less. It seems to require, on an average, about ten days, from the onset of the middle ear trouble for nature to do her work for fortification. In my experience, all of these wounds do better after this period; and really the cases which have gone on three weeks do the best of all. We are dealing with blood infection, the local lesion of which is in the field of aural surgery and we are called upon to remove this local process and so allow nature to send new blood reinforcements, opsonines, if you please to call them, and thereby overcome the pyogenic enemy, cast them out, and proceed with the process of repair. I have come to think that in mastoid cases, twelve to fourteen days is nature's best time, and I do not believe we can hurry her. If the blood-clot is used indiscriminately, many cases are sure to fail; but if used under favorable conditions, observing the precautions mentioned in operating, in post-operative treatment, and in selection of cases, we have a valuable method of wound repair." BANE.

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#### THE RESULTS OBTAINED FROM THE RADICAL OPERATION FOR CHRONIC PURULENT OTITIS MEDIA.

Edward Bradford Dench (*The Laryngoscope*, October, 1906). The frequency of chronic middle ear suppuration, the

fatal results of neglected cases, and the cure by radical operation are set forth. Deductions are drawn from personal experience in 193 operations. None had intra-cranial lesions develop after suppuration had ceased. "Out of the 193 cases, there are 131 cures, 29 with slight discharge, 5 with profuse discharge, 2 still under treatment, 6 fatal cases and 20 cases in which the result is unknown." Of the six deaths, two died of pneumonia, two of meningitis, one of cerebral abscess and one of cerebellar abscess. No deaths attributed to the operation. "Out of 111 cases in which the hearing records were kept, the hearing after operation was good in 99, fair in 9, and was bad in 3." In the last 95 cases operated upon, facial paralysis occurred in four instances, and in every instance the function of the facial has been restored." BANE.

## Constituent Societies

A regular meeting of the **Medical Society of the City and County of Denver** was held March 19, 1907, at the Academy of Medicine Building. Vice President Stover called the meeting to order at 8:20 p. m.

### Scientific Program.

Dr. Louis Hough, of Tampico, Mexico, read a paper on **The Successful Treatment of Yellow Fever**. The treatment, as outlined by Dr. Hough, was original with him, and was based on his personal observations in a number of epidemics; these observations lead him to the conclusion that the true pathology of the disease consisted in a toxemia of the cerebro-spinal and sympathetic nervous systems with resultant intense hyperemic engorgement of the alimentary mucosa.

He reasons from this that if the shock to the nervous system can be reduced, the fatal symptoms can be averted; he therefore attempts to splint the nervous system by the administration of heavy doses of bromides (40 grains every two hours), following a purge and sweating. By this treatment, Dr. Hough has saved his last fourteen cases and has been able to render all typical and malignant cases benign.

In the informal discussion which followed, Dr. Hough answered numerous questions as to

previous methods of treatment, personal experiences with and without the bromide treatment, etc.

Dr. Dixon having been called away, the chair called for voluntary reports of cases. Dr. Denison reported a case of **Cerebro-Spinal Meningitis** simulating grippe for several days; convulsions were absent till the very end of the case. Dr. Arneill, discussing this case, said it was of interest because it looked like grippe, albuminuria, with casts, were present in the urine, the patient gave some evidence of malingering, and Kernig's sign was present from the beginning. The case was discussed by Drs. Moleen, Hough, Pothuisje and Case.

Dr. Pothuisje reported a case of **Subphrenic Abscess** occurring in a child of 2½ years; the child had a pneumonia, followed by an empyema which ruptured into a bronchus; poor bronchial drainage ensuing the empyema pointed downward and in front becoming a subphrenic abscess.

Dr. J. B. Perkins reported a case of **Acute Yellow Atrophy of the Liver**, in which there was vomiting for eight days, increasing jaundice, renal suppression for two days, the case terminating fatally.

Dr. Shollenberger reported five cases of **Scarlet Fever** occurring in one family, the five cases developing in 60 hours.

Dr. Berlin reported two cases of **Scarlet Fever** in which acetone and diacetic acid were found in the urine.

Dr. Arneill reported a case of **Acromegaly** in a woman 52 years old.

Dr. Dixon, having returned, read a paper on **A Case of Colloid of the Mammary Gland**.

Mrs. X., 81 years old; when first seen the patient had a temperature of 103, pulse 106, a pathetic appearance. Examination revealed a tumor of the left breast, from which an abundance of fetid pus was escaping. The following history was obtained:

Thirty years ago she had a tumor of the left breast the size of an acorn which remained at a stand-still for fifteen years; the tumor then enlarged without axillary involvement, and subsequently diminished in size. At 72 years, the tumor was the size of a cannon ball, axilla uninvolved; at the age of 77, the tumor was removed and proved to be a fibroma. The tumor subsequently reappeared, but the general health of the patient remained good until recently, when the skin over the tumor broke, with resultant infection and septicemia, the condition when first seen by Dr. Dixon. Under local treatment the patient's general

condition was improved and the tumor was then removed en masse with pectoral muscles, but the axilla was not invaded. The patient was in the hospital thirteen days; recovery uneventful. The pathologic examination of the tumor showed Carcinoma Myxomatoides. The case was of interest; first, in presenting a tumor of 50 years' standing; second, the tumor was first an adeno-fibroma, and later a gelatinous cancer; third, the tumor increased at the menopause and diminished in size after the menopause, still remaining benign; fourth, is there any connection between fibroma and cancer? Fifth, the final tumor was not a recurrence because following the previous removal the tumor remained a fibroma. Dr. Dixon concludes that malignant tumors are not necessarily painful, malignant tumors may exist without cachexia, and that metastases are fatal and may occur before enlarged glands are demonstrable.

The secretary read the following resolutions on the death of Dr. J. C. B. Ray, which, on motion, were adopted:

Dr. Joseph C. B. Ray was a native of Kentucky. He died in Denver, Colo., March 4, 1907, from pneumonia, after an illness of nine days. Dr. Ray was a conservative and studious man, devoted to his chosen profession, his whole heart always being in his work. Soon after coming to Colorado, in 1901, a change made for the benefit of his health, he became an active member of the Medical Society of the City and County of Denver, always evincing deep interest in the scientific proceedings of that body. He was a man of energy and ambition far beyond his strength, finally giving his life to his chosen work. He was a trusted counselor, a successful practitioner, a warm and devoted friend, a Christian gentleman and a just and honorable man; therefore, as it has pleased Almighty God to call him from us to a higher and nobler life and work, be it

Resolved, That this society send flowers as a token of its high esteem, and its profound sympathy to the bereaved wife and family. Be it further

Resolved, That a copy of these resolutions be given the family and that they become a part of the records of this society.

DR. E. F. DEAN,  
DR. J. N. THOMAS,  
DR. J. W. HIGGINS,  
Committee.

On motion, the society adjourned.

Members present, 36.

ALBERT SILVERSTEIN,  
Secretary.

The Boulder County Medical Society held its regular monthly meeting Thursday, March 7, 1907, at 8:30 p. m., at the Longmont Hospital, Longmont, by invitation of the president, Dr. Charles F. Andrew.

The meeting was called to order by Dr. Andrew. Members present: Drs. Andrew, Campbell, Rodes, Garwood, Holden, Johnston, Giffin, Kate Lindsay, Weist, Eva Shireley, Pennock, Queal, Gilbert, John Andrew and Wood. Guests: Drs. Matlock, Taft, Clark, Potter, White and Stradley.

The minutes of the last meeting were read and approved.

Dr. Giffin raised some objection to the resolutions passed regarding fees for **insurance examinations**. He was not present at the discussion, and states that he believes work at \$3.00 is better paid than many other forms of work we do; he thinks that since all physicians of county are not members of county society, there is no good reason for turning away such work to those outside society, and will withdraw from society if such rule is in force.

Dr. Weist agrees with Dr. Giffin in many points. He signed several agreements to examine for \$3, and does not see how he can recall them. If the society endorses the resolutions read he would consider it dishonorable to receive a member unless he could live up to their rules. Would therefore feel obliged to sever his connection with the society.

A motion by Dr. Pennock to reconsider resolutions was seconded by Dr. Giffin.

Dr. Campbell thought that the same argument regarding insurance should apply to other questions of professional conduct. The vote at the last meeting was unanimous in favor of resolutions, and thinks voice of the society should be allowed to rule. He refuses the \$3 examinations, and thinks every member should be willing to stand by such a resolution and be willing to lose a little at present to try to obtain \$5 rate later. He would rather see the society go to pieces than rescind resolutions for the reasons given—that one man will get work if another does not.

Dr. Queal considers a medical society organized for scientific work, and not on monetary principles. Thinks the profession is put on trades union basis when a man who does not conform to rules of society is ineligible for membership.

The motion to reconsider was lost.

After further discussion, the motion by Dr.



Garwood, to reconsider resolutions concerning insurance work at next meeting, was carried.

The subject, "**Appendicitis**," was then discussed by several members and visitors of the society, each discussion being limited to ten minutes.

Dr. Gilbert confined himself to the medical side of the subject. He would rank the starvation, or Ochsner, treatment of appendicitis during the attack with the antitoxin treatment of diphtheria, or the prevention of small-pox by vaccination, as an equal boon to humanity. He believes operations within the first twenty-four hours always best—but as that is so often impossible, he has much faith in the medical treatment of an attack, and operation in the interval, unless conditions render it imperative during the attack.

He believes the few spoonfuls of food often given, sufficient to decide question of life or death. Absolutely no food, washing out stomach, if much distended, and morphine to quieten peristalsis, will usually relieve pain. He thinks it best to permit no food until temperature has been normal two or three days.

Dr. Rodes agrees with Dr. Gilbert in the treatment. He has been interested in the percentage of cases of recurrent attacks of appendicitis that go to abscess formation.

His experience has been that most cases of abscess have been with initial attacks. He has seen but one case with abscess that he considered a recurrent case. He believes in the free use of opium, in the use of oil enemata when lesser bowel is filled with faeces, and calomel with opium to relieve upper bowel. Operation is not justified unless surgeon is very skillful until attack has subsided, in cases of a mild course or recurrent type.

Dr. Pennock quoted Kelley as saying that every case of appendicitis that results fatally is a blunder. He thinks there is no need now of a failure of diagnosis, and believes in the Ochsner treatment until case can be placed on the operating table. He thinks it a mistake to wait too long for muscular rigidity, and considers the operation one of emergency to be done any time of day or night when diagnosis can be made.

Dr. Holden referred to the need of accuracy in determining the diagnosis; many cases are difficult to decide upon; he has accomplished best results with treatment similar to that outlined.

Dr. White has not met with many cases that

he has been able to diagnose as appendicitis. He adds to the classification already given of fulminating, catarrhal and chronic forms, the neoplastic form. The Ochsner treatment, as often tried with modifications, not successful; if properly tried, it is in a large percentage of cases. The time of operation is a question of judgment.

Dr. John Andrew asks for the best advice to give patients. Ochsner is said to operate on a greater percentage of cases than any other man in Chicago. He finds it difficult to advise operation, but believes it the best advice in most cases. He thinks it possible for any surgeon to operate in case of emergency, and considers operation for appendicitis an emergency operation.

The secretary was instructed to send Dr. Bashner the credentials necessary for transfer to Pueblo county.

The application of Dr. J. A. Matlock was referred to the Board of Censors.

The society then adjourned to meet April 4 in Boulder.

After adjournment those present repaired to dining room of the hospital, where light refreshments were served.

LUCY M. WOOD, Secretary.

The regular meeting of the **Weld County Medical Society** was held in Dr. Hughes' office Monday evening, March 4. The meeting was called to order with President Ringle in the chair, and a large attendance of representative members. Dr. Church, on behalf of executive, read a resolution on the **insurance question** similar in nature to those adopted by other societies. It was favorably discussed and held for final vote until next meeting. The society library was reported under full swing. Dr. Law offered all his files of the *Journal of the American Medical Association* and other valuable and historic literature, for which he received a vote of thanks.

The Censors reported favorably on the applications of Dr. Dille, Messrs. Clark and Faulkner, and by vote they were elected and admitted as associate members, respectively. Dr. J. K. Miller read a thesis on **Local Therapy**, covering the subject from a physiological and therapeutic standpoint. Some variance in opinion, as to the value of local applications was expressed by Drs. Candlin, Pogue, Hughes, Warren and Miller, in the discussion which followed. Some of the mud poultices being rather hard hit. Dr. Warren,

of La Salle, reported a series of cases in which he had used the anesthesia obtained by **Morphine, Hyocine and Cactine** (Abbott), with on untoward effects. Dr. Pogue reported a number of cases in which he had used **Passive Hyperaemia** as remedial agent after Bier, with good and satisfactory results, the cases being mostly localized infections.

Meeting adjourned.

CHARLES B. DYDE, Secretary.

**Larimer County Medical Society.** Regular meeting met in Dr. Roth's office. Those present were: Drs. Kickland, Reckley, Roth, Taylor, Fee, Rew, Upson, Killgore, Replogle, Quick, Norton, Sadler, Purcell and Stuver. The card of Dr. Thomas Purcell from the Erie County (Pennsylvania) Medical Society, showing him to be in good standing, was presented with the request that he be transferred to the Larimer County Medical Society. It was moved and duly seconded that Dr. Purcell be elected a member of our society; unanimously carried.

Dr. Kickland read a very interesting paper on the **Diagnosis of Appendicitis**, which was discussed by the majority of the physicians present, the general consensus of opinion being that when cases were seen early in the attack, that is within thirty-six hours of the beginning, operation should be performed immediately.

Dr. Stuver read a paper, **Should the Physician Dispense His Own Medicines**, in which after considering the various phases of the question from the standpoint of the best interests of both the physician and the patient the conclusion was reached that he should dispense his own medicines. The paper elicited a spirited discussion, in which nearly everyone present took part. Many valuable points were brought out by the discussion, and the position taken by the writer of the paper was endorsed and confirmed by all the speakers with two exceptions. At this stage of the proceedings the society repaired to the offices of Dr. Kickland, where a very dainty and appetizing lunch had been spread, under the direction of Drs. Roth and Kickland. At the conclusion of the lunch, a motion conveying the kind regards of the society to Dr. Kickland, who is about to depart for Vienna to take a special course in surgery, and wishing him a successful voyage and safe return, was unanimously adopted.

A motion was then made and unanimously adopted that a committee of three be appoint-

ed to inspect the slaughter houses and dairies of the city and vicinity, and report their findings to the society and the Chamber of Commerce at the earliest possible date. Dr. Upson, city health officer, Dr. Purcell and Dr. Replogle were appointed as this committee. Adjourned.

E. STUVER, Secretary.

La Junta, Colo., March 18, 1907.

**The Otero County Medical Society** met March 12, at 8 p. m. in County Court room. Those present were: Drs. Finney, Al Stubbs, Jessie Stubbs, Donlon and Moore.

A paper on "**Indications for Use of Obstetrical Forceps**" was read by Dr. F. Finney. Those present expressed their interest in the paper, and an exchange of ideas followed.

Adjourned until the next regular meeting.

W. MILROY MOORE, Secretary.

## Other Societies

### Colorado Ophthalmological Society.

The stated March meeting was held at the office of Dr. David B. Strickler, Empire building, Denver.

Dr. D. H. Coover presented a man of thirty-five showing a good result from an operation for **ptosis** of each upper lid, done seventeen years before in Germany; but a dry fistulous opening remained where the bridge of skin from the lid had been passed upwards under the eyebrow for attachment to the occipitofrontalis.

Dr. W. C. Bane showed a case of central scotoma from a small **circumscribed retinochoroiditis** just below and external to the macula, which had been benefited by potassium iodide.

Dr. G. F. Libby exhibited the case of **traumatic cataract** shown by him at the October meeting of this society, two weeks after a 2 mm. dissection had been made through the anterior capsule of the lens. Two months later a broad dissection had been done and had resulted in complete absorption of the cortical lens substance and all of the capsule except a peripheral ring, and restoration of normal vision with appropriate spherical lenses. Dr. Neep reported a similar case.

Dr. E. R. Neep reported severe **interstitial keratitis** in a child of seven years, with a salmon patch in the center of the cornea, which had been helped by syrup of hydriodic acid, although not tolerating potassium iodide; and also reported the removal of a

bit of steel  $\frac{1}{4}$  by  $1\frac{1}{2}$  mm., by Dr. J. A. Patterson and himself, with an electro-magnet.

Dr. Libby reported the death of two cases of **chronic interstitial nephritis** in patients between twenty and thirty years of age, reported at the April and November meetings, respectively.

Dr. Edward Jackson read a paper on "**The Astigmatic Lens in the Determination of the Amount and Principal Meridians of Astigmatia.**" He also spoke of a patient with 5.50 D. of **hyperopia and astigmatia** who had received the "rest cure" for **neurasthenia**, with no thought of refractive error and resultant eye-strain.

GEO. F. LIBBY, Secretary.

## Communications

### Opsonic Work.—Reports of Cases.

Editor Colorado Medicine:

A patient of mine, a girl of 20, came to me three weeks ago suffering from **Pyorrhea Alveolaris** (Riggs' Disease).

From the pus welling up from two of the teeth I grew the **staphylococcus albus**. Her opsonic index to this I found normal. Two inoculations at intervals of two weeks, with 250 millions **staphylococcus vaccine** produced a complete cure.

There was no local treatment.

It is of interest to note that I had just cured her father of boils, due to the **staphylococcus aureus**, and her sister is at present under treatment for **acne**, due to **staphylococcus albus**.

As far as I am aware, this is the first case treated by Wright's methods, and should the **staphylococci** be found as the cause in other cases, their cure will be a simple matter.

A preliminary report on a case of persistent **typhoid fistulae** (14 months) of the ribs might prove of value to your readers who have cases of this almost incurable disease. The patient was referred to me by Drs. Martin and Swan.

Two out of three sinuses have been cured, and the third almost, by inoculations at ten-day intervals, with **typhoid and staphylococcic vaccines**. Both these organisms were easily found in the **fistulae**. The index to each at the beginning of treatment was below .8, and each has been kept up to 1.1 to 1.5. The patient's serum will, now diluted 500 times, spontaneously agglutinate a **typhoid culture**, whereas normal serum will, undiluted, scarcely do so.

GERALD BERTRAM WEBB.

## Correspondence

### Medical Advertising.

Editor Colorado Medicine, Denver, Colo.:

My Dear Doctor—I am very happy to inform you that in reply to a letter written to the editor of each of the state journals on March 16, in regard to the active and practical support of the Council on Pharmacy and Chemistry of the American Medical Association by refusing to accept advertisements for medical preparations not approved by it, I have already received a letter saying that Michigan, Ohio, New Jersey, Arkansas and yourself, in addition to Illinois, Texas and California, have determined to accept only advertisements of approved preparations.

It is an especial pleasure to be the medium through which this concerted action for the betterment of the professional medical organs is to be communicated to you. Yours very truly,  
A. T. McCORMACK, Secretary.

## New Members

E. W. Lazell, J. F. Morning, Denver; J. A. Lawson, Rocky Ford; Thos. Purcell, Fort Collins.

## Items

Dr. A. F. Grove, formerly of Paonia, is now located at Crawford.

Drs. S. D. Van Meter, C. K. Fleming and T. W. Miles have been appointed, by Governor Buchtel, upon the State Board of Medical Examiners to serve for six consecutive years.

Dr. L. B. Lockard announces that he will resume his practice after March 11, 1907, at his former office. We wish to congratulate the doctor on the recovery of his health, which warrants this resumption.

Dr. S. Orentreich has been found guilty, by the jury in the Criminal Court, of a criminal assault upon a young girl named Rosa Berger, who, it is claimed, has been insane since, as a result of the act. The penalty is from one to twenty years in the state prison. A new trial may be asked for.



## Books Received

[All books received will be acknowledged in this column to be recognized by the contributor as the equivalent. Reviews will be made of these volumes according to merit and the interests of our readers.]

**Surgery of Genito-Urinary Organs.** By J. W. S. Gouley, M. D. Demi 8vo. Cloth, pp. 531. Price, \$3. New York: Rebman Company. 1907.

**Transactions of the College of Physicians of Philadelphia.** Third Series. Volume XXVIII. Cloth, pp. 322. Philadelphia: Printed for the College. 1906.

**Annual Report of the Surgeon-General of the Public Health and Marine—Hospital Service of the United States for the Fiscal Year 1906.** Washington: Government Printing Office, 1907.

**Principles and Application of Local Treatment in Diseases of the Skin.** By L. Duncan Bulkley, A. M., M. D., Physician to the New York Skin and Cancer Hospital; Consulting Physician to the New York Hospital, etc., etc. Small 8vo. cloth, pp. 142. Price, \$1. New York: Rebman Company. 1907.

**Psychology Applied to Medicine.** Introductory Studies by David W. Wells, M. D., Lecturer on Mental Physiology and Assistant in Ophthalmology, Boston University Medical School; Ophthalmic Surgeon, Massachusetts Homeopathic Hospital, Boston; Oculist, Newton (Mass.) Hospital. 12 mo. Cloth, pp. 141. Illustrated. Price, \$1.50 net. Philadelphia: F. A. Davis Company. 1907.

**Progressive Medicine, Vol. I, March, 1907.** A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, 280 pages. Per annum, in four cloth bound volumes, \$9; in paper binding, \$6; carriage paid to any address. Philadelphia and New York: Lea Brothers & Company, Publishers.

**International Clinics, A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Etc.** By Leading Mem-

bers of the Medical Profession Throughout the World. Edited by W. T. Longcope, M. D., with the collaboration of W. Osler, M. D., J. H. Musser, M. D., A. McPhedran, M. D., and others. Vol. I, Seventeenth Series. Cloth, pp. 318. Price, \$2.00, net. Philadelphia and London: J. B. Lippincott Company. 1907.

**Text-Book of Psychiatry.** A Psychological Study of Insanity for Practitioners and Students. By Dr. E. Mendel, A. O. Professor of the University of Berlin. Authorized Translation. Edited and Enlarged by William C. Krauss, M. D., Buffalo, N. Y.; President Board of Managers Buffalo State Hospital for Insane; Medical Superintendent Providence Retreat for Insane; Neurologist to Buffalo General, Erie County, Germany, Emergency Hospitals, etc.; Member of the American Neurological Association. Octavo, cloth. 311 Pages. \$2.00 net. Philadelphia: F. A. Davis Company, publishers, 1907.

**A Text-Book of the Practice of Medicine.** For Students and Practitioners. By Hobart Amory Hare, M. D., B. Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital; Laureate of the Royal Academy of Medicine in Belgium and of the Medical Society of London. Octavo; pp. 1120; with 131 engravings and 11 full-page plates in colors and monochrome. Second edition, revised and enlarged. Cloth, \$5, net. Philadelphia and New York: Lea Brothers & Company. 1907.

**Diseases of the Lungs,** Designed to be a Practical Presentation of the Subject for the Use of Students and Practitioners of Medicine. By Robert H. Babcock, A. M., M. D., Author of "Diseases of the Heart and Arterial System;" until recently, Professor of Clinical Medicine and Diseases of the Chest, College of Physicians and Surgeons (Medical Department of the Illinois State University), Chicago; Consulting Physician to Cook County Hospital, Mary Thompson Hospital, etc., etc. With Twelve Colored Plates and One Hundred and Four Text Illustrations. First Edition. Octavo, Cloth; pp. 809. Price \$6.00. New York and London: D. Appleton & Company, 1907.

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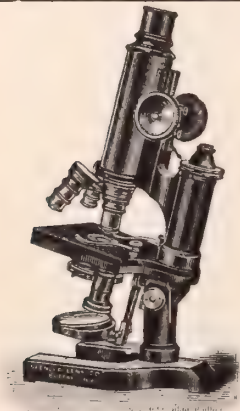
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# COLORADO MEDICINE

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All *communications* to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are *typewritten*.

Communications and items of interest are invited from all parts of the state. Death notices, removals, changes of address, etc., are especially desired.

*Secretaries* of the County Societies are earnestly requested to report their meetings, including the subject matter of the papers presented, and in general, the substance of the discussions.

Marked copies of local newspapers, or clippings, containing matters of interest to the profession will be gratefully acknowledged. The name of the sender should be given.

The journal will be issued on the 15th of each month. *All copy* must reach the editor not later than the first of the month. Advertisements of proprietary medicines will be accepted provided the preparations advertised have been

Council of approved by the Pharmacy and Chemistry of the American Medical Association. Address all communications regarding advertising to

JAMES M. BLAINE, M. D., *Adv. Mgr.*, 3-4 Steele Block, Denver, Colo.

## IMPORTANT NOTICE.

All members of the Colorado State Medical Society are entitled to a copy of this journal each month. Failure to receive the same, and change of address, should be promptly communicated to the editor.

VOL. IV.

DENVER, MAY, 1907

No. 5

## Editorial Comment

### THE ACADEMY OF MEDICINE.

Something over two years ago the Denver Academy of Medicine took a definite shape, establishing a reading room and occupying a hall which was built for its use.

In the words of the retiring president of the Academy, "The Colorado Medical Library Association died a quiet death" and bequeathed all of its property to the Denver Academy of Medicine—consisting of over 2,300 volumes and several tons of reprints, pamphlets and journals, which are now at the Denver Public Library.

The Denver Academy is viewed by many as a competitive (if we may so designate it) medical society because of the papers read during the winter months upon scientific topics; they believe in supporting the Academy purely for the library possibilities which its continuance assures. The real purpose of an Academy, however, is that of a higher instruc-

tive body and composed of those who have an interest in the scientific progress of the profession rather than the medical from commercial and political sides; its membership is not intended to be confined to counties.

If the Academy is to lose its identity as a medical organization and to devote itself to the accumulation of a medical library, it is a question whether it would not have been more fitting to allow the Colorado Medical Library Association to absorb the Academy of Medicine than *vice versa*.

In our opinion, however, there is a place for the Academy of Medicine and one for the County Medical Society quite distinct and apart, but with the persistence of the former we see no reason for a fellowship membership in the latter.

The New York Academy of Medicine, the Philadelphia College of Physicians and many others are successful organizations which have made their positions felt by the higher order of their work. Why not in Denver?



### CHANGE OF OPINION.

By careful perusal of our society reports it will be noted that at a meeting a few weeks ago the Boulder County Society endorsed the recommendation of the American Medical Association and the local state society relating to the fees for life insurance examinations.

At a subsequent meeting, viz: March 7th, two prominent members raised the point that they would rather give up the society than the privilege of making examinations for \$3.00, but a motion to reconsider was lost. Then a like motion at the next meeting prevailed.

The reader is referred to another page in the present issue for a report of Boulder County Medical Society under date of April 4th. The report of this meeting would give one the impression that the medical politician or the agent of the insurance companies had been at work during the interim, for the meeting was evidently packed with \$3.00 men, and, after a brave fight made by those loyal to the State Medical Society and the American Medical Association, the resolution was finally laid on the table.

*Et tu Brute!* One of the oldest, best and strongest societies in the state has been the *only one* to table the recommendation of the American Medical Association and the Colorado State Medical Society, while the youngest county society in the state has adopted the most stringent resolutions bearing on this subject.

At a time when concerted action might have meant much for dignity and general welfare of the profession, our solid front has been broken at a point where we might least have expected it.

Threats to leave the society rather than give up doing cheap work reminds one of the old Pennsylvania sinner who had occupied a pew in church for twenty years and who, when the pews were assessed

25 cents, vowed he would not submit to such robbery but, instead, would leave the church.

The physician who places such a small value on the benefits to be obtained from medical organization and association either feels too brilliant to need fellow counsel or too obtuse to assimilate any of it.

Where is McCormack?

Just now in Nebraska doing good work and awaiting an invitation to visit Colorado and duplicate the good work done in other states *free of cost to us*, and where are the councillors of our own State Society, from whom the invitation should come? "We pause for a reply."

J. M. B.

[Under date of May 2nd, Dr. McCormack writes from Beatrice, Nebraska: "I am having fine meetings in this state, as was the case in Iowa, and it cannot but result in good."—Ed.]

### RAILROAD RATES TO THE GLENWOOD SPRINGS MEETING.

The Colorado Passenger Association has granted a rate of one fare for the round trip from all parts of the state on all roads. The tickets are good for ten days. The Midland Railroad has made us a rate of \$8.50 from Denver, Colorado Springs and Pueblo to Glenwood and return, provided we can assure them of one hundred who will go by a special train. This is \$3.50 less than the one fare rate. This special train will leave Denver on the morning of September 16th and will arrive in Glenwood between 8 and 9 o'clock that same evening. The leaving time, 9:30 a. m., will enable the members from the Northern, Eastern and Clear Creek districts to make easy connections with this train. This train will be equipped with chair cars and Pullmans. Reservations for Pullman accommodations will have to be made

in advance with the Midland Railroad office and as many Pullmans will be put on as are needed. The regular Pullman charge for a half or full section will be made. In addition this train will carry a dining car which will serve both luncheon and dinner. The Pueblo members who desire to take this train can connect with it at Colorado Springs. The same may be said for the Trinidad and La Junta districts. The Teller county members can join us at Divide.

The Midland Railroad passes through a portion of the state which many of our members have not seen and which boasts of the most beautiful scenery of any in the Rocky mountain region.

The trip has been arranged for the day-time because it is believed that the majority who go will be accompanied by ladies and that all will enjoy the scenery as well as the general good fellowship which will obtain on this special train. Then again, our by-laws require that the House of Delegates hold a meeting on the evening preceding the first day of the regular session and that it shall hold its second meeting at 9 o'clock a. m. on the morning of the first day. It is, therefore, plain that in order to hold these two meetings of the House of Delegates we must be in Glenwood on the evening of September 16th. Are you with us? We hope so. It is not too early to begin to lay your plans.

MELVILLE BLACK,

Secretary.

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### COFFEE OR PISTOLS?

Editor Hill, of the *Denver Medical Times* (and *Utah Annex*), who is known as the best chemist in the profession, recently undertook some work in the pure food line for a certain Denver daily newspaper. On April 25th, this paper reported that two certain brands of cof-

fee contained *chickory*. The next day, April 26th, the same paper reported in red letters in the first column, that a *careful* analysis by the same chemist showed *no chickory*.

From our long personal acquaintance with Professor Hill, we are willing to wager the drinks (of coffee) that if he made the first test, it also was *careful*, for Hill never does anything carelessly. But we are at a loss to conjecture just what power or influence changed the lens in that microscope before the second test was made.

In the meantime we are in ignorance as to whether our morning decoction is a solution of chickory or red ink.

J. M. B.

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### PHILIPPINE MEDICAL ASSOCIATION MEETING.

We are in receipt of a program of the fourth annual meeting of the Philippine Islands Medical Association, which was held in Manila, February 27 to March 3, 1907. The roll of members numbers twenty-nine. The scientific program is replete with timely subjects which indicate the high order of work which is being done. We wish to congratulate the society and extend to them our best wishes for their continued prosperity.

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### ONE HUNDREDTH ANNIVERSARY.

In the March number of the *Columbia University Quarterly* is announced the 100th anniversary of the establishment of the College of Physicians and Surgeons, which had its inception March 12, 1807.

The event is to be celebrated at the time of the coming commencement of the University in June. A century of successful medical teaching is worthy of the congratulations of the entire medical world.

## Original Articles

### INTERNAL DERANGEMENTS OF THE KNEE-JOINT, WITH RE- PORT OF CASES.

By LEONARD FREEMAN, M.D., Denver,  
Colo.

No joint is of more importance than the knee, because it has to support the weight of the body, and because locomotion depends so largely upon its integrity. An individual with a crippled knee, and there are many such, is in a sad plight indeed, and often incapacitated from earning a living. In spite of this, affections of the knee-joint, outside of tuberculosis, and floating cartilages, have not received adequate attention from the profession at large, especially in this country. This indifference arises from several sources,—from lack of emphasis of the subject in most of our colleges and text books, from difficulties in diagnosis, and from fear of operations upon the knee by both patients and physicians; this fear being based upon the idea that stiffness is very apt to result from loss of lubricating fluid, or from adhesions. It should be more thoroughly understood by every one, that permanent stiffness seldom follows an operation on the knee, when it is properly done, when the cause of the original trouble is removed, and *when infection does not occur*; infection being by far the most prominent factor. The loss of lubricating fluid, so greatly feared by the laity and by many physicians, is of no importance, as it is rapidly and adequately reformed. Temporary stiffness, however, generally follows an operation of any magnitude, and sometimes persists for months, and for this the patient should always be prepared. Hence, for this reason, and because of the danger of infection, which, although slight, is ever present, the knee-joint

should never be opened without good cause and under the most favorable circumstances; but when such a cause exists, an operation should be done without hesitation.

In this paper I shall confine my remarks to affections of the semilunar cartilages, which, aside from tuberculosis, are perhaps the most frequent sources of chronic knee-joint troubles. They come under the head of "internal derangements of the knee," which term was introduced by Hey, over one hundred years ago. It must be understood, however, that this designation is a general one, covering a number of distinct lesions presenting similar symptoms, among which a differential diagnosis is often extremely difficult, or even impossible without an operation. Under this head, for instance, come elongated synovial fringes; folds of thickened synovial membrane; abnormal masses of sub-capsular fat; rupture of the crucial ligaments; elongation of the patellar ligament; relaxation of the lateral ligaments; loosening of the semilunar cartilages; rupture or splitting of the semilunar cartilages; bruising of the semilunar cartilages, followed by their chronic enlargement; loose bodies and tumors of various kinds, together with numerous other difficulties of a more or less definite nature, such as sprains, faulty distribution of body weight, rupture of ligaments, etc.

Owing to the uncertainty of accurate diagnosis in many instances, "internal derangement" remains, perhaps, the best designation for a certain group of symptoms. Other terms are "loose, movable or dislocated semilunar cartilages," "subluxation of the knee," "Hey's joint," "spring knee," "trigger knee," etc.

*Pathology.*—The semilunar cartilages occupy the circumference of the flat, and even somewhat convex, surface of the head of the tibia, and by their wedge-



shaped form assist in holding the condyles of the femur in their proper position. Most of this work, however, is done by the lateral and patellar ligaments so that the semilunars can be removed without serious difficulty resulting. They are firmly held at both ends, but somewhat loosely attached to the tibia and joint-capsule at all other points, so that they are naturally slightly moveable, and it is only when their movability is considerably increased that it becomes of pathologic importance. When this is the case, the cartilage may get pinched between the articulating surfaces of tibia and femur during certain movements of the knee, or it may be forcibly squeezed out, between the bones and the capsule. In either case, pain and locking of the joint result, accompanied often by swelling and intra-articular effusion. Frequently the cartilage becomes frayed along its internal border, or even torn across, split lengthwise, or twisted upon itself. Occasionally it is detached at one or both ends, and may float about in the joint like a pedunculated tumor, or lie curled up in the intercondyloid notch. According to Roux the cartilages sometimes become thickened from repeated injuries, (chronic traumatic meniscitis), even when they are not abnormally movable, and thus give rise to painful symptoms by interfering with complete extension.

Undoubtedly, laxness of the lateral and patellar ligaments often has much to do with internal derangement, inasmuch as it permits of undue rotary movements of the tibia upon the femur, thus leading to displacements and injuries of the cartilages. In some knees this laxity is so great that the head of the tibia may even slip directly backward far enough to engage the semi-lunars between the articulating surfaces. Malformations of the limb, tending to knock-knee or bow-

legs may be concerned in producing this relaxation, as may also rachitis and distention of the joint with fluid from various causes.

*Cause.*—The usual cause, in the acute form, is a sudden and forcible twist of the tibia upon the femur while the knee is more or less flexed. Relaxation of the ligaments undoubtedly adds to the danger, but it is not a necessary factor, as internal derangements often occur in athletic young men where laxity of the ligaments could not be suspected. The accident often happens in football, in alighting from moving cars, and in falls of various kinds. It is produced by a femoral condyle either over-riding the outer edge of the corresponding semilunar cartilage, or else pushing the cartilage before it, tearing it more or less from its moorings, and crowding it outward against the capsule. When once loosened in this way, the cartilage is apt to slip again, under much slighter provocation.

The onset of an internal derangement, however, is not always acute, or due to a serious accident; and this, I am sure, is often responsible for its being overlooked. It may come slowly, especially in the presence of relaxation of ligaments, the cartilage becoming gradually loosened by repeated and comparatively trivial twistings of the leg. This is seen in rapidly growing children, particularly those afflicted with rachitis, in women of lax build who have gained suddenly and markedly in weight, and in those whose occupations require them to spend considerable time upon their knees with outward rotation of the feet, as in housemaids, miners and religious devotees. In arising from such a position the knee will often suddenly "lock" (Robson).

*Symptoms.* — The most prominent symptom is sudden locking of the knee; accompanied by great pain and inability to straighten the limb, although it can

often be flexed without great difficulty. This is said to differentiate the trouble from a sprain, in which the knee can be extended, but not flexed (Cotterill). The most that can be said of this diagnostic point, however, is that it is suggestive, but not reliable. Following the accident soreness remains over the semilunar cartilage together with puffiness of the side of the joint and occasionally hydrops articuli. Repeated occurrences of the phenomenon cause this condition to become chronic and disability of the joint results. Sometimes an elevation or a depression can be detected at the site of the cartilage; but this is by no means always the case and should not be too strongly considered in diagnosis.

It should be emphasized that many cases of internal derangement come on more or less slowly, without accident, and without sudden locking of the joint, merely exhibiting pain, soreness and puffiness over the semilunar cartilage together with loss of function. Such conditions are apt to be misinterpreted and escape proper treatment.

In acute cases and in severe chronic ones the disability may be great enough to necessitate the use of crutches, or even to prevent locomotion altogether. Acute locking of the joint may occur only at long intervals, or it may take place so frequently as to cause great anxiety every time the patient moves about, owing to the embarrassment and danger of suddenly falling in the street or elsewhere. The cause is often ridiculously trivial. Such as stubbing the toe, turning suddenly to look over the shoulder, rolling over in bed, etc. In those whose avocations require free use of the lower limbs the inconvenience is sometimes extreme, and such unfortunates are to be found in almost every community.

*Treatment.*—In acute cases, where the joint is locked and painful, the first thing

to do is to replace the dislocated cartilage, if possible. This can usually be done by flexing the joint still further, rotating the tibia outwards or inwards according to circumstances, and then making rapid extension. This does not generally require an anesthetic, because, although painful, it can be quickly accomplished. No absolute rules can be given, however, as to the exact method of manipulation, although, in general, where the internal cartilage is concerned the tibia should be rotated outwards and where the external cartilage is involved the rotation should be inward. In the majority of cases various twistings, flexions and extensions will have to be gone through with, until reduction is accomplished. Further treatment consists in the application of a splint, together with hot and cold compresses, until these symptoms have subsided. Complete rest should be enjoined for some days, followed by the use of some form of apparatus, such as that suggested further on, until the cartilage has had an opportunity to become adherent in its original position, which will require at least from three to five weeks. It may be said that if these precautions were always carried out, there would be far fewer cases of chronic internal derangement and much less necessity for operations.

Where the cartilage has been slipped a number of times and has become more or less permanently loose, the problem of cure is more difficult. Many things have been advocated, including the wearing of plaster casts, elastic knee-caps, and braces confined to the vicinity of the joint (Marsh); but although these appliances undoubtedly do some good, they often fail, because they do not prevent rotation of the tibia upon the femur, which is the essential cause of the trouble. An elastic knee-cap is particularly useless, and perhaps harm-

ful, in that it tends to cause weakening of ligaments and atrophy of muscles, upon the tension of both of which the integrity of the joint so largely depends.

Massage has been suggested, as well as counter-irritation by means of the thermo-cautery. Either of these measures may be of service in mild cases, and may always be employed to advantage in connection with an appropriate brace; but in bad cases, especially where rupture of the cartilages exists, they are of little use.

In many instances good results may be obtained by the use of a properly constructed brace, such as that described by Shaffer, of New York, (*Annals of Surgery*, 1898, Vol. 28, p. 417). This consists of a light steel rod, padded at the knee and hinged so as to permit flexion of the joint, and running well up on the thigh and down the outside of the limb to the heel, where it is attached firmly to the shoe. A shorter rod, also hinged, is placed along the internal surface of the limb and carries a round pad which presses against the lateral surface of the joint. The apparatus is held in place by a broad band of leather about the thigh, and narrower bands above and below the knee (see illustration). The hinges in the rods are so arranged as to prevent full extension of the joint, thus doing away with all stretching of the relaxed and weakened ligaments and permitting them to gradually contract and become more firm. Such a brace not only supports the joint in every way, giving a sense of security and permitting locomotion without fear or danger, but what is of paramount importance, it guards against rotation of the tibia upon the femur, which is not true of any form of brace not reaching from the thigh to the foot.\*

\*The Shaffer brace has been excellently constructed for me by Mr. William Jones, of 1430 Stout street, Denver.

During the last few years I have used this apparatus some fifteen times with very satisfactory results, nearly all the cases, however, being mild ones and not of long standing. Nine patients recovered entirely, the rest being either improved or lost sight of.

Acute cases should never be operated upon; but in bad chronic cases, and in those where the use of a brace has failed, (and a brace should always be tried, where there is the slightest prospect of cure), an operation is not only indicated, but imperatively called for. *It should always be conducted, however, under the most careful surgical precautions and never undertaken otherwise.*

If the joint contains fluid, I can see no reason for delay until this has become absorbed, as is insisted upon by English writers, on account of the supposed increased danger of infection from stitch abscesses; because fluid always accumulates anyhow as an effect of the operation itself. Many forms of incision have been suggested, but the one I have devised and always used has been so satisfactory that I have not seen fit to try any other. This incision forms a U-shaped flap of all the tissues, including the capsule, upon the internal or external surface of the joint as required, and lying between the lateral ligament on the one hand and the patella and its ligament on the other. The base of the flap may be either upwards or downwards, but it must be so arranged as to thoroughly uncover the edge of the tibia and the semilunar cartilage surmounting it. Division of the lateral ligament is seldom necessary. I have occasionally varied the procedure by turning a skin flap upwards and a flap of the deeper tissues downwards, so as not to bring the lines of suture opposite each other, but I do not know that any advantage exists in this modification.

Hemorrhage should be checked by crushing the vessels and by torsion,



rather than by ligatures, and if the fingers are inserted in the wound at all, they should always be encased in rubber gloves. In order to carry out the most rigid asepsis, a face mask should be worn. There must be as little rough handling of the tissues as possible, and all blood should be removed from the joint, with or without irrigation, as may be indicated.

Several English surgeons have strongly advised merely sewing the loose cartilage to the periosteum of the tibia instead of removing it, but this custom is not generally followed in this and other countries, although it will occasionally succeed. By far the better plan is always to exercise the entire cartilage, in spite of the fact that some operators have advised removal of the external border only, others the internal border, and still others the mere excision of loose fragments where they exist.

In excising the cartilage, it should be pulled out of the joint with a blunt hook (forceps slip off too easily) and cut from its moorings with scissors. Once or twice I have been able to twist the cartilage from its posterior attachment after cutting it free anteriorly.

The capsule and fascia should be accurately reunited with continuous catgut sutures, in order to avoid unnecessary knots, and the skin sutures with silkworm gut. Drainage is unnecessary, unless oozing persists, and then it should be used for a few hours only. A snug bandage and a posterior splint complete the dressing.

Slight passive motion and massage should be begun in about two weeks, and soon after this the patient can be permitted to go about on crutches with gradually increasing use of the limb.

Swelling, tenderness and inhibition of function always persist for a number of weeks and even months, so that unless

the patient be forewarned, discouragement often results; but the final outcome is almost invariably satisfactory. Properly conducted massage and passive motion are of great assistance and are always indicated. An occasional use of the thermo-cautery or the hot-air bath is also of essential advantage.

My experience is limited to seven excisions of semilunar cartilages done upon six patients. Brief reports of these cases follow:

*Case 1.*—Mr. C., aged 30, baker. As a result of twisting the right leg externally while the knee was flexed, the joint became suddenly "locked," which was accompanied by pain and tenderness over the internal semilunar cartilage and some swelling. The difficulty recurred frequently during the course of more than a year, giving rise to great disability and suffering. Considerable relief was obtained by wearing a plaster cast; but as soon as this was removed the trouble returned. At the time I examined him he had been using crutches for several months, and was unable to pursue his occupation. The joint was moderately swollen, and tender over the internal semilunar cartilage, but there was no prominence or depression at this point. It could be moved and straightened without pain, but the weight of the body could not be sustained upon it. *Operation* at St. Joseph's Hospital, March, 1901. A U-shaped flap of skin, fascia and capsule was turned upward on the internal aspect of the joint and the semilunar cartilage excised. It was completely loose, except at its extremities, and lay rolled upon itself across the joint, between the head of the tibia and the condyle of the femur. Primary union. Much stiffness and soreness persisted for several weeks; but at the end of nine or ten weeks the limb could be used fairly well. On August 19, 1906,

five and one-half years after the operation, the patient writes: "I have gone hunting in the mountains nearly every year since, and can walk better than most men and take longer walks. \* \* \* My work keeps me on my feet twelve to fourteen hours daily, so the knee don't get much rest."

*Case 2.*—Mr. B., aged 38, mining engineer. Injured his left knee in a game of football many years ago and twice since that time. The first injury was a blow on the outside of the joint, and the last a twist of the leg sustained in jumping from a wall. On each occasion the knee became painful, swollen and tender over the internal semilunar cartilage, and it was necessary to use crutches for several weeks. Since the last accident, two and one-half years ago, he has been upon crutches continuously and unable to attend to his duties. Plaster casts had been worn for months at a time without permanent improvement. The knee was not swollen, but the muscles of the calf and thigh were considerably atrophied. There was no external evidence of derangement of the semilunar cartilage, although the joint was tender in that region. Extension was complete, the patient stating that he had never experienced difficulty in this regard, but no weight could be borne upon the limb. *Operation* at St. Joseph's Hospital, January, 1906. The joint was opened on the internal surface by the formation of a U-shaped flap with its base upwards; and the semilunar cartilage found completely loosened from its attachments, except at its ends, its posterior half being split longitudinally. It lay between the articulating surfaces. Primary union. In four or five weeks the knee, although somewhat swollen and still tender, could be bent to an angle of 120 degrees, and the patient could walk several squares without support. A letter written some eight months later stated

that he "could do everything (with the joint) but run." The last I heard from him he was in the Klondyke and the knee was in excellent condition.

*Case 3.*—Mr. C., aged 35, locomotive engineer. About twelve years ago he sprained his left knee in alighting from a railroad train. Since then the joint has been "weak," and every few months would gradually swell, causing protracted inconvenience and pain. For some time he has used crutches and has been able to work. The greatest amount of pain was felt just below the patella and just above it, but the most pronounced tenderness was over the internal semilunar cartilage. *Operation* at St. Joseph's Hospital, November, 1905. A U-shaped flap was turned upwards internal to the patella ligament, the semi-lunar cartilage found loosened from its central moorings, and excised. Primary union. Nine months after the operation the patient reported that "this leg was just as limber as the other," and the recovery complete.

*Case 4.*—Miss G., aged 15, school girl. Fell about ten months ago, injuring her left knee upon its internal surface, the joint remaining tender; painful and swollen with inability to completely extend it. Plaster casts were ineffectually employed under the impression that the trouble was tuberculous, and for the last three months she had been unable to walk without crutches and has suffered much. On examination, the knee was found swollen and tender over the internal semilunar cartilage, although no projection or depression could be detected. *Operation* at St. Joseph's Hospital, June, 1905. The skin was turned upwards internal to the patellar ligament by means of a U-shaped incision; while the deeper tissues including the capsule were turned downwards in a similarly shaped flap, so as not to bring the inner line of incision

opposite the outer one. The semilunar cartilage was found loosened from its attachments, except at its extremities, and was excised. Primary union. The joint remained stiff and tender for several months, but when the patient presented herself for examination one year later, she could walk easily without support, although a moderate amount of tenderness of the joint still existed and flexion was not quite complete. Improvement is still taking place, and there can be little doubt that complete restoration of function will ultimately result, although it probably would have been more rapid, if proper massage and passive movements had been employed.

*Case 5.*—Master B., aged 13, elevator pilot. Several years ago the left knee gradually became lame without any injury that could be recalled. It would frequently “lock,” suddenly, in a moderately flexed position, accompanied by swelling, pain and tenderness over the external semilunar cartilage. His physician diagnosed tuberculosis, and placed the joint in a plaster cast for a year. This gave rise to improvement, but as soon as the cast was removed, the trouble returned as bad as before. On examination, the knee was found to be slightly flexed, stiff, swollen and tender so that the use of crutches was necessary. *Operation* at St. Joseph’s Hospital, January, 1905. Separate U-shaped flaps were employed for the skin and deeper tissues, the outer one having its base downwards and the inner one upwards. The external semilunar cartilage was very loose in its central portion and was removed by dividing its anterior attachment and twisting it out of the joint with large forceps. Primary union. Although considerable soreness and stiffness followed, the joint gradually recovered its usefulness and the boy returned to his usual work. Some three months after this operation,

while jumping into his elevator, he twisted his knee, and struck it against a large box. Swelling and great pain resulted, with tenderness over the internal semilunar cartilage. At the end of six weeks he was still confined to bed and suffering intensely upon the slightest movement of the partly flexed joint. Other treatment failing, it was decided to remove the internal semilunar cartilage. *Operation* at St. Joseph’s Hospital, May, 1906. An internal U-shaped skin-flap being employed with the base upwards. The deeper tissues were divided by a similarly shaped incision with its base downwards. The cartilage, which could be felt through the skin, was very loose and was excised. Recovery from stiffness and soreness was slow, but improvement was reported at the end of about four months.

*Case 6.*—Woman, aged 29. Has had a “weak knee” on the left side for seven or eight years, which was always more or less tender and which would occasionally “lock” and cause her to fall, especially when the leg received a twist. The trouble appeared gradually and without an injury as far as could be remembered. For a year she had been unable to walk without support, and for three weeks previous to the operation the knee could not be flexed without “catching,” so that she felt compelled to walk backwards, dragging, as it were, the extended limb after her. *Operation* at St. Joseph’s Hospital, September, 1902. U-shaped flap with base upwards over internal surface of joint. Two pathologic conditions were found—a loose semilunar cartilage and an abnormal amount of subcapsular fat projecting into the articulation. Both cartilage and fat were removed. Primary union. Considerable tenderness and stiffness followed the operation, but by the end of three months the patient could walk without support of any kind, and from that time her improvement was rap-



id and satisfactory. At present, four years after the arthrotomy, she walks without discomfort or limping and remains on her feet all day.

#### Discussion.

Dr. George B. Packard: I do not know that I can add anything to what Dr. Freeman has already said, as he has covered the ground very thoroughly. I can only emphasize some of the points he has made.

You must remember the knee joint is not a simple hinge joint, but with extreme extension, there is very little external rotation, and in these cases I have no doubt that this is a positive factor in loosening of the cartilage. The relaxation of the ligaments and the extreme hyperextension, with external rotation, are the principal causes of this affection. Of course there are other conditions we are very apt to mistake for loose cartilage—the villous synovitis cases and some of the cases of lipoma. We not only get the same sound, but tenderness over this one point which is a suspicious symptom.

I would like to emphasize the efficiency of mechanical treatment. I think nearly all of these cases do remarkably well under mechanical treatment. Most of the joints from repeated attacks of inflammation have more or less relaxation, so that the lateral ligaments are stretched out, and there is a good deal of abnormal motion. The brace that has been described only allowing antero-posterior motion, is an efficient support to the joint. It should be so constructed that it is impossible for any hyperextension to take place, or any external rotation, and then being worn carefully, in the majority of cases, brings about excellent results.

### BONE INJURIES.

By W. T. B. BAKER, M.D., Pueblo, Colo.

To those who are constantly engaged in caring for a large number of people who are employed in those undertakings in which they are apt to suffer from the effects of contusions, the subject of bone injuries is an interesting one.

It is for the purpose of bringing before the members of the profession here assembled that I have undertaken to present this article, with the hope of gain-

ing knowledge of how to more fully prevent the dangerous sequels of bone injuries, and to attempt to impress upon them the importance of being guarded in making a diagnosis and favorable prognosis, especially in those cases which are considered at the time of their inception as being only trivial in their nature.

The main function of the skeleton is passively mechanical. By their construction and arrangement, the bones are adapted to bear all the strain put upon them during the ordinary course of life, but they are sometimes subjected to violence beyond their power of resistance. The amount of violence which bones will endure before fracture occurs, of course, varies with the individual. Experiments along these lines have been made with the testing machines of Messrs. Riehle Brothers. Various bones recently removed from a strong male were selected as representing the average full grown specimen. The strains applied by the machines were transverse, crushing and tensile.

Transverse force, which corresponds to direct impact, was applied to the femur, tibia and fibula; crushing force, corresponding to indirect force, was applied to the femur, tibia, fibula and humerus; and tensile strain was tested on the patella.

The results of these tests were as follows:

*Transverse Strain:* Femur yielded to a force of 1,155 pounds. Tibia and fibula yielded to a force of 1,115 pounds.

*Crushing Strain:* Femur yielded to a force of 3,130 pounds, but not before it had bent 20 degrees from its axis. Tibia and fibula yielded to a force of 2,270 pounds. Humerus yielded to a force of 2,530 pounds. Patella resisted 1,845 pounds of tensile strength.

These tests are remarkable, and the

only explanation of the facts is that the strains were applied gradually.

A bone is almost always fractured by suddenly applied force and rarely by one which moves along almost imperceptibly.

Any injury of the bones, whether it be that most common, namely, *fractures*, or what not, should be thoroughly studied and in the most practical manner, for out of no other class of cases have so many suits for malpractice arisen. Court calendars are everywhere crowded with cases of personal injury. It is estimated that one-half of the jury trials in the state of New York concern actions for personal injuries, but even judicial records fail to reflect the real activity in this branch of law, since for one litigated case there are at least eight settled out of court.

The reason for this is not difficult to perceive, lameness in the lower extremity, or disability in the upper, will fix the attention of the patient and attract the notice of others, and too often the idea of bringing suit on the basis of an indiscreet promise of the surgeon to get a good result is suggested by some legal light who is ready to assist in the attempt to blackmail.

Fractures, which constitute by far the most numerous class of bone injuries, will not be mentioned in this paper. We are all taught, if not in college, later, by actual experience, the dangers of such cases, especially if they be compound, comminuted or complicated, but how many of us ever receive any warning from the words of our instructors, or our colleagues in the profession, about the other injuries of bones which do not result in a solution of continuity. Only in a few works will we find any special mention as to the far-reaching effects of bone injuries and especially, if I may be allowed to use the words, of bone contusions.

Contusions of bones are not uncom-

mon and although the soft parts are also bruised and the soreness in them masks that of the bones, yet there is perceptible for a long time, a deep-seated tenderness which gives evidence that the bone has suffered. Important as this question is, in its sociological and legal connections, its true inwardness, so far as the medical man is concerned, is in the added requirements that the prominence of traumatism in general pathology lays upon him. Now, as never before, it is imperative that every practitioner be familiar with the effects of injury on the body in health and disease.

Often nature repairs the damages inflicted in these cases, but occasionally the results are more serious and inflammation may ensue, the periosteum swells and perhaps osteitis may follow. There are instances, and much more common than is generally supposed, and according to some authors only when a constitutional disease is present, where the nutrition of the entire bone becomes involved and its inflammation or its death may take place, or if the disorder be more localized, an abscess may form in the cancellous substance and give rise to very troublesome symptoms.

Traumatism may exercise an evident action upon pre-existing constitutional states; it may call them to the wounded spot, make them pass from a latent to an active condition, and cause their manifestations to appear at the site of injury itself, in distant regions or through the entire economy.

The subject of contusions and contused wounds of bone was ably investigated by the late J. A. Lidell, who traced seven distinct conditions which may result from contusions of bone: (1) Ecchymosis of the osseous tissue; (2) ecchymosis of the medullary tissue; (3) simple osteomyelitis; (4) necrotic osteitis; (5) suppurative osteomyelitis; (6) septic or gangrenous osteomyelitis; (7) necrosis produced

directly by contusion without the intervention of either ecchymosis or inflammatory irritation.

To these the statement may be added that if the bone which is contused be in the neighborhood of a joint, the latter may undergo serious or fatal disorganization, or, if an important organ, such as the brain, be adjacent secondary visceral disease may result.

In the aged, shortening and atrophy especially of the long bones may result from bone contusion; this condition may be mistaken for fracture.

Bone is occasionally formed in muscle as a result of some frequently repeated traumatism, such as the kicking of a gun, the so-called exercise bones. Dums reports the unique case, where, after the extirpation of an exercise bone in the deltoid muscle, a reflex neurosis, consisting of tremors and pains of the entire arm, down to the finger tips, completely disappeared.

Not infrequently there develops at the point where the periosteum has been contused, a traumatic ossifying periostitis, in consequence of which the bone becomes thickened, and this often becomes very painful. Some such cases have been observed among the boys who are constantly engaged in work at drill presses, where the pressure upon the treadles causes such painful areas to exist.

Such in brief are the complaints with which mankind is afflicted, and taking it for granted that the statement that only those in whom a constitutional disease existed are subject to the serious sequel of bone contusions, how many patients do we find who are free from the taints of syphilis, tuberculosis or the like?

According to the location of the point of least resistance, the pathological process always originates in its vascular structures, the medulla or the periosteum. Periostitis implies that the periosteum is

inflamed, but the superficial layers of the bone always suffer. We seldom observe a pure osteitis, periostitis or myelitis, but usually an inflammation including two of the contiguous parts. Strict limitation to one of these parts does not occur, hence the term, osteomyelitis.

The amount of harm which deep tissues may have sustained in any given injury can only be estimated by a correct appreciation of the force which has been applied, and of the position and condition of the injured part at the time of its reception. It can never be made out by the simple inspection of outward appearances.

It must not be forgotten that the relationship between traumatisms and disorders, that are not immediately surgical, is often very obscure and difficult of demonstration. In many cases the relationship is incontestable, though how brought about, uncertain; in others it can hardly be said from our present knowledge to be more than probable—this is especially the case when there is a long time interval between the receipt of the injury and the first appearance of symptoms.

Diagnosis in all traumatic cases means much more than a simple recognition of the particular injury or disease that has an accident as its starting point. It means the type of man affected by it quite as much as the injury itself, for what in one man would be little more than an inconvenience, would in another be a cause of death. Diagnosis therefore implies an estimation of the resistance of the individual quite as much as of the extent of immediate injury, and the ability to estimate injury implies not only a knowledge of general physiology, but also a familiarity with the social and personal conditions that favor or discourage the processes of recuperation and repair. It is the physician who considers the problem from this point of view who will find



his prognosis verified by subsequent events.

In view of what has been said, one should be most guarded in giving a too favorable prognosis in those cases especially where the bones which are less fully protected by soft parts are injured. An ounce of caution is worth a pound of regret.

An acute inflammation of bone, lasting only a day or two, causes rapid softening. Even a slight injury may lead to the bending or even fracture in the vascular bone of a growing child. If a strain, short of breaking, is put upon any weakened bone it is often sufficient to set up a traumatic inflammation, and some absorption of its tissue is bound to occur.

A diminution in the arterial blood supply hinders the formation of periosteal bone, while the cancellous bone continues to be absorbed by osteoclasts; while venous congestion is attended by excessive bone formation; this is seen where a varicose ulcer exists.

Since, with any contusion of bone the overlying soft parts must necessarily be affected, the line of treatment which must be followed depends primarily upon the condition of the said soft parts.

In the milder forms and where after careful examination one has satisfied himself that the injury to the bone has not been great, the muscles should be put into that position which affords them the greatest amount of relaxation, and preventing inflammation by the use of cold compresses.

Where the accident has been of a more serious type and the blood vessels are occluded as a result of the trauma, one can readily see that the use of ice or cold in any form would be injudicious and unwise; here the use of heat should be adopted and continued until all hopes of

restoration by means of collateral circulation has failed.

#### Discussion.

Dr. Sol. G. Kahn: I desire to compliment Dr. Baker on his excellent paper and for calling our attention to so practical a subject. The class of cases to which he has referred is the one which causes the most concern in reference to the life and future usefulness of a limb or joint. It is not so much a question of the life of the patient as it is the usefulness of the joint or the limb which has been injured. In reference to the prognosis, we should always be guarded in injuries of this nature, for the reason that the external evidence of injury rarely gives us any idea of the seriousness of the accident which an individual has sustained. We must consider always the missile or projectile which has caused the injury, or whether the patient fell some distance and sustained an injury. The tendency is to tell people, when we first see them after an injury, and there are no external manifestations, that the injury is trivial, or that it does not amount to much, and they will be all right in a short time. This is a mistake, in injuries of this nature, we should be exceedingly guarded in our prognosis, and not give quite such a favorable one as the tendency naturally is.

There is another injury of bones or possibly of joints which may result from an injury to the capsule, and that is hemiarthritis or injury of the overlying tissues of the bone, which frequently gives us considerable trouble. While these are not, strictly speaking, bone injuries, they are bone injuries in the sense that they are not injuries to the soft tissues, and we cannot see why a patient has received such an injury when there has been no solution of continuity in the case and nothing that is tangible.

I recall the case of a man who was injured about a year and a half ago from a fall. He fell quite a distance, striking on one shoulder, and had injured that shoulder joint. There was nothing tangible. He has the use of the shoulder joint, also the use of his arm, and by manipulation there was no fracture which could be made out, nor a dislocation; at the same time, the man's arm is not useful today. He complains of pain constantly and with trouble with that particular joint, when he attempts to use it.

Dr. W. W. Grant: This (exhibiting patient) is the only case I have had in my own prac-

tice of complete separation of the head of the radius, which occurred three weeks ago, when this gentleman was turning the crank of his auto; it recoiled on him, carried his hand around, and the result was a typical deformity such as we see in Colles' fracture. The anterior displacement was marked backward, but his hand in this silver-fork position was perfect.

It being a rather unusual case, I thought probably you would take an interest in seeing it. There is nothing but a thickening of the parts, with perfect use of his wrist. The only other case is one reported by Stimson, in his book on "Fractures and Dislocations," at that case is hardly as typical as this.

### *THE RADICAL CURE OF VARICOCELE AND ITS RESULTS.*

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Some authorities consider varicocele more of a blemish than a serious abnormal condition demanding surgical intervention. For example: In 9,815 recruits examined for enlistment in the Spanish-American war 2,078 had varicoceles. And only three or four of these complained of any uneasiness caused by the condition.

According to the army ruling, a varicocele smaller than the normal testicle does not demand rejection. Varicoceles larger than this demand rejection, or operative cure of the condition.

All cases of varicoceles do not demand or justify radical cure, and the size of the swelling caused by the dilated veins is not a satisfactory criterion as to the line of treatment to be instituted.

Large varicoceles may cause no symptoms, and smaller ones may give rise to very annoying manifestations of their presence. Many of the psychic symptoms caused by reading quack literature will disappear after an explanation of the facts in the case, and the lesser annoy-

ances will be relieved by the following of simple hygienic and physiological directions.

The first question in a consideration of this subject is to outline the indications for the radical treatment, and they may be summarized as follows:

(1) The size of the tumor; in which it has become an annoyance to the patient; (2) atrophy of the testicle; (3) pain in the testicle or scrotum, either a dull ache or a sharp shooting neuralgic pain; (4) pain in the lumbar region, demonstrably due to the varicocele; (5) marked hypochondriasis; (6) its occurrence in connection with hernia; (7) when necessary for entrance into military, naval or some civil services.

Having decided that an operation for the radical cure is indicated, a choice of method becomes necessary.

The older methods, such as injection, electricity, and subcutaneous ligation are uncertain, dangerous and unsurgical, and may be passed with no comment as they are of historic interest only.

Amputation of the scrotum (Cooper) was based upon the erroneous idea that the relaxation of the scrotum was a cause instead of an effect of the dilatation of the veins, and has been abandoned.

Incision of the skin and ligation of the veins was unsatisfactory, as likewise was the resection of the veins after ligation (Howse).

Excision of the veins, in connection with an amputation of the scrotum was followed by many recurrences.

Bennett's modification of Howse's operation which consists of a union of the stumps of the ligated and excised veins with their connective tissue sheath, is perhaps the method most commonly used today and with very satisfactory results.

The location of the incision has changed from the scrotum to the suprapubic region, at the external inguinal

ring. The veins at this point are easily located; there is less danger of injuring the spermatic artery or the vas deferens; the lower part of the veins may easily be drawn up to the incision, and healing is more satisfactory in this location.

Aguirre has recently carried out a method which consists of an amputation of the scrotum, and the ligation, division and reunion of the stumps, through the incision in the scrotum.

As it has been demonstrated that amputation of the scrotum is unnecessary, this procedure merely complicates what is otherwise a very simple operation.

The radical treatment of varicocele has become an every-day occurrence, the mortality is practically *nil*, and the immediate results are, as a rule, very satisfactory.

The one important question remaining with the subject is the result.

The immediate result is easily obtained because the patient is under observation, and, unless some accident takes place, such as hemorrhage or infection, it is satisfactory.

The remote results are difficult to anticipate, because a large number must be observed in order to be of value, hence hospital statistics must be called upon, and the difficulty of keeping track of the average hospital patient is well known.

The occurrence of two cases in which hydrocele developed following operation for varicocele, in my own practice, with the knowledge of another instance in the practice of a colleague, and the report of Corner and Nitch in the *British Medical Journal*, January 27, 1906, led to a realization of such an occurrence as a remote result.

Corner and Nitch examined 100 cases that had been operated upon for varicocele by the high operation; as a remote result they found that the most common alteration from the normal was a change in the consistency of the gland itself; a

hardness of the testis, this was found in about 90 per cent of the cases, and is due to a connective tissue increase. This same change takes place in large varicoceles without operation, but the alteration occurs most slowly.

The epididymis is usually larger, harder, and more easily felt. In their 100 cases spermatocele developed twice.

In 55 per cent. of their cases, the testicle on the side operated upon was distinctly larger than the opposite organ, despite the fact that, as a rule, the testis on the affected side is smaller before operation.

The skin and connective tissue was thickened in about 50 per cent. of the cases, though this was uncertain because of the coincident occurrence of hydrocele.

Hydrocele following operation for varicocele, they found in 8 per cent. a large and tense hydrocele, noticeable and annoying to the patient; and 15 per cent. small a flaccid, unnoticeable to the patient, making 23 per cent. in all.

This condition is undoubtedly due to a venous obstruction, as are the fibroses in the testicle and the epididymis.

The hydrocele occurs early after operation and may entirely disappear.

While on a recent trip to the Mayo clinic, at Rochester, I learned that C. H. Mayo had noted this occurrence of hydrocele following operations for varicocele. It has also occurred so frequently in the Johns Hopkins Hospital that Bloodgood is preparing a report upon the subject.

C. H. Mayo meets this condition by supplementing his varicocele operation with an operation for hydrocele, the eversion of the tunica vaginalis, known as the Winkelman, the Doyen or the Vautrin operation; in effect, performing a prophylactic hydrocele operation in connection with the one for varicocele.

Since that time I have performed this combined operation in three instances,



and in one was surprised to find an unsuspected small accumulation of fluid in the cavity of the tunica vaginalis, which leads to the supposition that many of these hydroceles found after operation, might have been present, though unsuspected, before and at the time of the operation.

Therefore, even if the prophylactic operation is not employed, it would seem advisable to inspect the tunica vaginalis in every case operated upon for varicocele, otherwise an unsuspected hydrocele may be overlooked.

Hydrocele is not a serious complication, but it is an unsatisfactory outcome and efforts should be made to prevent it.

In two of the 100 cases, hernia developed subsequent to the operation. These, of course, can not be attributed to the operation, but it is recommended by the authors that, in large varicoceles, the inguinal canal be sutured.

In view of the fact that if an incipient hernia is present it is at the internal ring in the shape of a dimpling, an outward protrusion of the parietal peritoneum at the internal ring, it would seem that nothing less than a radical cure for the hernia would be of any practical avail.

It is surprising that there were only 2 per cent. of post-operative hernias when the frequency with which hernia and varicocele are found in conjunction is remembered.

There was a recurrence in only 2 per cent. of the cases of Corner and Nitch; they do occur, but they are seldom seen by the original operator. In the past year I have seen two cases of varicocele in which the patient said an operation for varicocele had been performed; in neither case were the symptoms demanding reoperation present.

In 70 per cent. of the cases the patients expressed themselves as being pleased with, and improved by the operation, and

only 4 per cent. stated that they were worse because of it.

#### Discussion.

Dr. Charles A. Powers: I did not expect to be called upon to open the discussion on this paper. Personally, I have been doing of late the Pryor operation, the inguinal operation, of which Dr. Connell speaks. But I have been rather more embarrassed in the selection of my varicocele cases than in the operation itself. I think they have been selected with the utmost care. Young men, with but slight varix, with marked symptoms, I think, are not apt to be benefited. Personally, I have not met with subsequent hydrocele or other conditions to which Dr. Connell alludes, and living in such a city as this, where a very considerable percentage of one's cases come from the immediate neighborhood, one, I think, is rather apt to know of the subsequent condition if an untoward result occurs. Perhaps I have been fortunate in that respect. But I am very much interested in these statistics regarding the ultimate outcome of these cases. In suitably selected cases I think the operation is one of the most satisfactory we can undertake. I am very glad indeed to have heard what Dr. Connell has said.

Dr. Leonard Freeman: I have had no experience with varicocele following herniotomy. I have seen hydrocele follow hernia operations, and this may rest upon the same foundation, in that there is a disturbance of the venous circulation. Even if no veins are removed at the time of operation, cicatricial pressure may interfere with the circulation. A case I operated on this morning for hydrocele was operated on five years ago for hernia. Some few months ago I had a similar experience.

#### *SURGICAL TREATMENT OF CANCER OF THE RECTUM IN WOMEN.*

By W. B. CRAIG, M.D., Denver, Colo.

There is the best of testimony to prove an alarming increase of cancerous affections in the world; in fact statistics show that in a period of a little over half a century, in England and Wales, the proportion has increased from 1 in 5,646, in population, to 1 in 403, and the proportion of deaths from carcinoma to those of all other diseases from 1 in 129, at the

beginning, to 1 in 23, at the end of the same period of time.

Likewise, older statistics maintain that 3 per cent. of all cancers are in the rectum, and that 80 per cent of those in the intestines are found in this organ; later investigation places even a larger percentage upon this estimate.

A little over twice the number occur in the rectum than in the sigmoid flexure of the colon.

While cancer is unquestionably more frequent in women, yet fewer women have it in this locality than men.

Those who believe in the traumatic or irritative origin of malignancy, attribute its frequency in women to the fact of the rectum being more exposed to injury and the sigmoid type in men to coarse, irritating food, dissipation, etc.

Before the advent of cleanly surgery the mortality following the radical treatment of malignant neoplasms of this region was so great and appalling that every one hesitated at it, and many abandoned its performance; since then, extirpation of the rectum has proven to be at least primarily successful—if not ultimately, thus prolonging life and in selected cases, affecting a permanent cure—the mortality being in direct proportion to the extent and thoroughness of the operation. About 13 per cent of all cases treated by complete extirpation died, during a definite period from the introduction of asepsis up to about five years ago; since then the mortality has increased to about 20 per cent. This is due to the fact that surgeons, emboldened by success, pushed their efforts to the point of refusing practically no case presenting even the most aggravated signs and symptoms of advanced disease; and also to the fact that inexperienced men followed this example.

The indications for extirpation are very briefly, a movable tumor or growth;

no involvement of other organs; no metastasis or glandular extension. Good physical condition and ability to withstand the loss of blood and shock. No cachexia.

Contra-indications: Extension to other viscera, skin, remote organs or bones, low vitality, as evidenced by fever, rapid pulse, etc. No cachexia nor gastric disturbance.

Exception may be taken in a few instances where the uterus and its adnexas are probably associated with the tumor by inflammatory adhesions or exudation, and where the periosteum of the pelvic wall is uninvolved in the malignant advancement. Where the vaginal wall is involved that is no real contra-indication only in so far as presaging extension, or possible metastasis, i. e., late implication. It is in this class of cases that vaginal resection or total ablation offers fairly good results.

Before this occurs the perineal route in women is especially indicated, peritoneal tolerance to cleanly invasion is such that the height of rectal involvement is no great drawback to wide and free dissection and extensive ablation.

This rule can be clearly formulated: That when the neoplasm is situated low, extirpation can be effected by the perineal route. When the ampulla or middle rectal wall is implicated the vaginal method is the best, excepting where the cancerous mass is mostly posteriorly situated and the gut is fixed, then the sacral; and lastly, where the upper portion is the seat of disease it is best approached by the abdominal or combined method. By any of the several methods as much as one foot of the rectum can be amputated.

The chief feature that leads to certain results is asepsis, the next is rapidity of operation and perfect hemostasis. No mention will be made of minor surgical treatment, entero-anastomosis, etc. In-

guinal colostomy mitigates suffering, delays the fatal end by freeing the neoplasm of irritating discharges, and in the few cases only, when obstruction of the bowels from the stricture of the rectum does occur, prolongs life.

The diagnosis by exploratory laparotomy while of undoubted advantage in the male, is less frequently necessary in women, by reason of the information afforded by a bi-manual examination. Inflammatory adnexal conditions sometimes confuse and differentiation can only be made by making a supra-pubic opening which enables one's hand to freely explore the pelvis, however, if it is possible to be otherwise exact, avoid this procedure, unless a combined upper and lower operation is contemplated, the shock of which is extreme, by reason of the time consumed and the handling of the contents of the abdomen and their exposure to the atmosphere.

The rule previously laid down seems, in general, applicable to the various situations of the neoplasm, but the exception can be safely made with respect to women, that owing to her physical conformation the lower route with its several methods is the easiest, safest and hence the best.

Anyone doing bladder prostatic and high rectal work in the male cannot but feel the handicap of a narrow, deep perineum; close tuberosities and fat being the impediments; likewise, the close relationship of urethra prostate and bladder are additional difficulties to be encountered; whereas, in the female, the wide separation of the tuberosities and the presence of the vaginal canal both tend to facilitate the work of rectal ablation, by enabling the surgeon to see the entire field of operation, and in the perineal method a buttonhole of the vaginal wall is of no importance, and adherent tis-

sues are separated deliberately, and any amount of vaginal wall may be cut away at pleasure.

We believe that in consequence of the facility afforded the operation by her conformation, that the abdominal or combined method in women should seldom be chosen, unless in especially selected cases. Murphy has popularized the vaginal route for extirpation of the rectum and lower sigmoid for cancer, which has certainly much to commend itself, and the more this method is employed the more the surgeon will be pleased with it.

The operation can be as radical by this route as the upper, even to the extent of removing all glandular foci behind the rectum and sigmoid. The peritoneum can be protected all the time and at the conclusion of the operation closed, thus making a very finished technic.

It was in the eighties that Kraske sprung his surprise and instituted a method — since variously modified — which promised much towards revolutionizing old ideas of technic and route of approach in cases of malignant growth of the lower bowel, i. e., the sacral method; yet at this late day it seems that a Kraske, and its improvements by equally thoughtful and skillful men, is open to many objections, and that its field of usefulness is becoming more and more restricted, as early and exact diagnosis becomes the order of the day.

The abdominal route or method and the combined, have their especial application in the high situation of the neoplasm in the rectum, and more particularly, disease of the sigmoid itself.

The old rule is now to be applied to the male, alone, that where the upper limit of the growth cannot be fully reached by the index finger inserted in the anus the lower route should be aban-



doned for the upper, or a combined operation instituted.

So much can be done by opening the abdomen and such various technics employed, diseased glands sought out and removed, that this way of approach and method of operation must afford a succor and relief not accorded the patient by the lower route of invasion alone. Women, strange to say, suffer less shock and run less risk of sepsis from intra-peritoneal operations, than men.

The establishment of an artificial anus preliminary to perineal or vaginal ablation of the intestine is popular, and does possess some splendid features; anyway during the performance of an abdominal extirpation a permanent anus can be made, if advisable, deliberately, or at any time should urgent symptoms supervene and judgment dictate this to be the only or best course to pursue. One should provide a temporary anus in operating very feeble or septic cases.

From a table of statistics covering over some 1,500 cases of extirpation of the rectum and sigmoid, the following conclusions may be drawn: That the mortality was from the—

Sacral Method .....	23-1
Perineal Method .....	13-5
Abdominal Method .....	36-7
Combined Method .....	40-9
Vaginal Method .....	14-3

and that the vaginal and perineal methods in women gave the best results, but on the other hand, another set of statistics comparing the vaginal with the abdominal or combined processes, prove conclusively that the latter is attended with the same mortality as the vaginal.

Tuttle says: "That in eighteen cases of abdominal and combined operation in women there were only three deaths, and that for some unknown reason women stand peritoneal invasion better than men."

Quenu's table of sixteen cases done

by the combined method, of which eight were men and eight women, shows that of the women seven recovered and one died, and that of the men seven died and one recovered.

Thus one is discouraged, (should these latter figures appeal) from doing the combined operation in men, and encouraged to perform it in women. At any rate it would seem, after all is said, that the personal equation must have something to do in the making of statistics, and should have everything to do in the selection of the route and method in performing radical and complete extirpation of the rectum in women.

Discussion.

Dr. Crum Epler: The subject you have listened to is one that the ordinary man of less experience than the essayist cannot give any great amount of personal experience in.

One of the difficulties I found in looking up this subject was that the experience of men who have been engaged in rectal surgery for years along the line of cancer of the rectum, with their statistics, showed that they had operated on from one to possibly fifteen cases, while the ordinary surgeon reports three times that many in exceptional cases. Therefore, the statistics of any individual surgeon are hardly worth tying to. When we combine the statistics of the general surgeon with those of the specialist, working under different circumstances and on a different class of patients, getting the cases in all stages of the disease, we can get fairly accurate statistics.

The surgical treatment of cancer in women is one that has attracted my attention more or less for a period of ten years. My experience has taught me, however, contrary to the experience of those who have done more work in this line than myself, that there are more cases of cancer of the rectum in women than in men; but you will find, on looking up the matter, that it is claimed that sixty or seventy-five per cent. of the cases of cancer of the rectum are in males. This has not been my experience.

In looking over the literature upon the subject, I find that the increase of cancer in New York state, New Jersey, in America generally, as well as in Continental Europe and England, has been, during the past sixty or sixty-five years, alarming. I would like to

ask the essayist if he can tell us the cause of this, in his closing remarks. Let me ask another question, namely, whether or not altitude has anything to do with cancer of the rectum, or any portion of the body, as I saw, when I practiced medicine in the Mississippi Valley. Why, I do not know. Possibly, I do not see quite so many people in this state, but I do not see as many cases of cancer today as formerly in any of its forms.

The question of the surgical treatment of cancer of the rectum is one that is important to me, and it occurs to me that what cases are really operable is a part of the consideration of the treatment. I should like to have the essayist dwell upon that point, in his remarks, for my own satisfaction, as well as the satisfaction of those present. Where there is obstruction, and where it is necessary to do colotomy for the purpose of relieving the pent-up secretions and excretions in the colon, in that particular case it would be unnecessary to extirpate the rectum. On the other hand, we might be able to diagnose very early a case of cancer of the rectum, and then we have the two extremes. Where are we going to draw the line? I understand that in exceptional cases, which the essayist gave, the rectum might be attached to the vagina, or any portion of it might be removed, to relieve the condition. But, in a general way, I should like to have him, for my own satisfaction, explain exactly where we are going to draw the line. As a rule, we do not get these cases sufficiently early for operation or medical treatment until the disease has extended throughout the connective tissue and round about. Very frequently the disease is so far advanced as to be beyond belief by operative procedure, so far as my ability to diagnose these cases is concerned. My idea and rule has been that if the parts are movable we should operate, but if they are fixed we should hesitate to do so; unless it be posteriorly, the patient may object to the operation. The question arises whether the patient is benefited or not; whether the longevity of the patient is increased by operation, or whether by palliative means we can relieve the patient for a time if the obstruction is not too great.

I have appreciated the doctor's paper, and have listened to it with a great deal of pleasure.

Dr. I. B. Perkins: I enjoyed Dr. Craig's paper very much indeed. The subject of cancer of the rectum, or cancer in any part of the body, is something that concerns us all greatly at this time.

I believe there is no subject on which so many are working as on the subject of cancer. We are trying to find out its cause, how to make an early diagnosis, and how to effect a cure. Cancer of the rectum has been and is one of the hardest problems we have had to face. The method Dr. Craig describes, of making use of the vagina where a considerable portion of the lower part of the rectum has been removed, or can be removed, is very ingenious, and I see no reason why it should not be successful. Of course, when the cancer is situated high, and an artificial anus must be made, the combined method of operating should be employed. This method, however, is much harder to perform in women than in men, owing to the close proximity of the rectum and vagina. In doing the combined operation two should work instead of one. One man should work on the rectal portion, while the other attends to the abdominal part.

One of the neatest and best operations it has ever been my good fortune to witness was done in this manner by the Drs. Mayo. Dr. Charles Mayo operated from below, while Dr. Wm. J. Mayo worked from above. The intestine was severed above the growth, giving plenty of room to loop the sigmoid, which was then lifted out of the abdominal cavity, having been first turned in by means of a purse-string suture, much as one would invaginate the appendix. A second purse-string was then used. The first suture was not cut, but was left hanging out, so that later the end of the sigmoid could be drawn through the artificial anus, and it was left in that way for a few days until firm peritoneal union had taken place, after which the purse-string was cut, traction being made on this first purse-string, which drew out the invaginated portion, and by this method any possible soiling of the peritoneum was prevented. The portion of bowel removed below was invaginated at its upper, or severed end, and a double purse-string was used to prevent leakage; then, with a pair of forceps run up through the rectum, the invaginated end was cut and the rectum was turned wrong-side-out, having been previously loosened. Gauze put into the bowel at first to distend it, aided the operator in dissecting, so as to get all the diseased tissue. The opening was then closed over from above, just as one would close the peritoneum over the vagina from above when removing the uterus. The operation was a very clean one and was quickly performed, with very little hemorrhage, and was followed by little or no

shock. The blood vessels supplying the rectum had been secured in the first steps of the operation, some of them from above and some from below, so that the operation was practically a bloodless one.

Dr. Craig (closing the discussion): I will try to answer, if possible, Dr. Epler's three questions.

First, with respect to the infrequency of cancer in Colorado, I will say it is due to the fact of our relatively small population. I do not think there is anything in high altitude or sunlight in the retardation of cancer. In places like New York, London and Philadelphia, crowded centers, along with other factors, I think we get cancers more frequently. We find cancer more prevalent in these crowded centers just as we do more tuberculosis.

Second, with regard to determining in a given instance the propriety of operation, that is a matter of serious import to the patient and physician. My feelings with regard to withholding advice to operate in cancer of the rectum in advanced stages are like those of Tuttle. First, we should carefully consider the relative degree of the advancement, the neoplasm, and second, the environments and resistance of the patient, and this is one of the factors we are not always capable of estimating or enumerating in a given case. Tuttle is persistent in his belief that we should not withhold radical operation in some of these cases, even though the disease is far-advanced. Recently this question came home to me. A case from the City of Mexico was referred to me. She called to see a physician in November, when she complained of her first rectal symptoms. She had been treated for hemorrhoids. She had no condition in the estimation of the rural physician which warranted examination of the rectum. In February, at the instance of another physician, a careful examination of the rectum was made, and about two inches and a half above the anus, above the internal sphincter, there was an annular constriction. The patient was referred to me for possible operation. Having made a careful examination which disclosed cancer, the necessity of operation was advised, to which the woman very wisely and courageously consented. The question of an artificial anus was repulsed and declined; but she was assured that pretty good sphincteric control could be had by a properly done colostomy. The neoplasm in this case, when removed by this lower route, was found to be as large as my fist. About six inches of

the rectum was pulled down and extirpated without button-holing the vagina. The neoplasm was not attached anteriorly; but there were several malignant glands in the hollow of the sacrum which were removed by this route; the peritoneum closed off; the gut was closed without any soiling of the peritoneum; the vagina first cut away from the anterior wall of the rectum, the rectum brought down, and stitched to preserve the sphincter. The gut was brought down as in a simple resection. This operation was done the twenty-sixth of April. Recently an examination was made by a physician in the City of Mexico, and so far as he was able to discern there is no evidence of recurrence of the disease. In the consultation among physicians here, the consensus of opinion was that the woman could not live longer than four months. Here was an instance in which the malignant neoplasm was breaking down and gave the odor of putrefaction. One could break off tissue with the finger, so far advanced was the neoplasm, and yet six months have elapsed without recurrence having taken place. Of course, that immunity is a relative one. We must naturally expect recurrence in the course of time. However, her condition has much improved over what it would have been, in my estimation, without operation. An examination one year subsequent to operation shows no sign of recurrence.

The indications in these cases are clear to remove the neoplasm, if situated low down, and there is no cachexia, even in a late case. Tuttle would not withhold the chance from such a patient if she or he insisted on operation. Cases he thought were the least hopeful had survived the operation the longest.

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### *RUPTURE OF THE URINARY BLADDER.*

By JOHN R. ESPEY, M.D., Trinidad,  
Colo.

Few surgeons who are often brought in contact with emergency surgery—particularly railroad and mining surgery—but can recall one or more deaths from rupture of the urinary bladder. My belief that while many such cases are known the majority of them are not diagnosed or are not diagnosed soon enough to be of any benefit, has induced me to present



this subject to the society. I think if attention is called to the large percentage of recoveries following operation in these rather difficult injuries, increased acumen in the diagnosis and more boldness in the treatment will save many lives.

Rupture of the bladder with the patient otherwise in good health has but few causes, all of them included, in the term violence. Gunshot and stab wounds have penetrated this viscus, although from its protected position in the pelvis when empty and its partially protected position when distended with urine, it frequently escapes and many of large surgical manipulation and distending the bladder with solutions or gases have resulted in rupture from pressure. In these cases the bladder walls have very probably been weakened by disease. The most common cause is undoubtedly crushing violence such as comes from being squeezed between cars or crushed beneath heavy objects. Fracture of the pelvis, the fragments of the pelvic bones, perforating the bladder, cause a large percentage of such injuries. Until recently my personal experience would not bear this out as I had seen a number of cases of fracture of the pelvis without puncture of the bladder and had seen several cases of rupture of the bladder from a squeeze without fracture of the pelvis, but had not seen them conjointly. I had expressed myself as skeptical as to this being a frequent association when by those coincidences that seem to govern surgical cases I saw two patients in succession in whom the fractured pelvis was the cause of the ruptured bladder. I do not believe, however, that ordinary single or slight fractures of the pelvis are very liable to puncture the bladder, unless it is accompanied by over-distension, when it may rupture from pressure suddenly applied

without fracture of the pelvis. In fact, it happens that I have seen several cases of rupture of the bladder from sudden violent pressure where there was absolutely no fracture of the pelvis. I may have seen cases of rupture of the bladder and fracture of the pelvis associated in railroad or mining injuries where the violence had so damaged and crushed the individual that life was rapidly ebbing away and there was neither time nor need for an accurate diagnosis. In abdominal surgery the bladder is also liable to be torn in breaking up adhesions, but this, while a disagreeable complication, is a part of the risk of the primary operation and if the damage is promptly recognized and the lesion properly repaired may result in no serious harm. Certainly in such cases complicated by infection, or in persons so reduced that healing is problematical, or where the lesion is so inaccessible that proper repair is impossible, it may result in a fatality. However, the surgeon qualified for abdominal surgery is generally able to successfully overcome this unfortunate mishap.

Drunkenness, with its tendency to an over-distended bladder and falls and violence, is also described as a more or less frequent cause of rupture of the bladder, and these particular cases are said to be frequently overlooked. Of the fact that an otherwise healthy but distended bladder can be ruptured by sudden pressure there is ample and frequent demonstration.

The symptoms of rupture of the bladder may very plainly call attention to the injury or may be very obscure. The bladder may rupture at the fundus or posteriorly thus connecting directly with the general peritoneal cavity, in which case there is generally, but not always, considerable shock. The rupture may occur at the base of the bladder and be recognized by effusion of urine into the peri-

neal and scrotal tissues or the rupture may occur anteriorly and the effusion of urine will be into the cavity of Retzius and thence extending down into the perineal and scrotal tissues and to the under side of the penis. This is recognized by the dark, boggy condition of the tissues characteristic of the infiltration of urine. There may be severe pain or pain may be very slight. In rupture anteriorly into the cavity of Retzius this cavity is very liable to fill up under pressure and to manipulation and percussion very much resemble the distended bladder. Very generally there is inability to pass urine. There are said to be exceptions to this. I think the exceptions must be rare. What urine can be drawn with a catheter will generally contain more or less blood. The catheter passed into the bladder will be gripped by the viscus and cannot be turned as in a cavity filled with fluid. It may even pass on through the rent in the bladder. In cases where any or all of these symptoms occur with a history of violence, it is very important to make an early diagnosis.

It is said this can be done by emptying the bladder and then injecting a known quantity—not less than eight ounces—of solution, either boric acid or normal salt, into the bladder through a catheter and then withdrawing the solution. If all of the solution that was injected into the bladder returns it is stated positively in many of our standard textbooks that there is no rupture. While this forms strong presumptive evidence that there is no rupture, I have learned in the hard school of distressing experience that it is not absolutely certain.

In this connection I wish to report a case in which this method of excluding rupture of the bladder led me astray and I held my hand when operation might have—indeed, I think probably would have—saved a life. A miner 21 years

old, otherwise healthy, was caught by a heavy cross bar falling from roof of mine on July 11th, last, and pinning him down. There were in evidence multiple bruises about pelvis, but no fracture could be demonstrated. The urine drawn contained blood, and the symptoms generally pointed to rupture of the bladder. However, after catheterizing him, I injected eight ounces of normal salt solution and then withdrew a trifle more than eight ounces of blood and urine-stained salt solution. My instinct was to operate, notwithstanding this evidence that there was no rupture of the bladder, but authorities in whom I had the utmost confidence, stated that under these circumstances there could be no rupture of the bladder, and I had never heard it contradicted.

The patient died July 14th—three days after admission—during which time much urine and blood had been withdrawn by catheter, but peritonitis had developed within thirty-six hours after the injury.

Autopsy the day following his death showed a fracture of the inner plate of the pubic bone on the left side. This fracture could not be demonstrated without operation during life, as the outer plate was not fractured—just as we may have a fracture of the inner plate of the skull from external violence without fracture of the external plate. This fragment of bone had penetrated the bladder both extra-peritoneally and then probably from the inside of the bladder intra-peritoneally. I think that the solution that I withdrew by catheter was contained in the cavity of Retzius and was a reflow through the extra-peritoneal wound. Of course, the fact that it so nearly coincided with the amount injected as a diagnostic measure—not being less nor appreciably more—was merely a coincidence. But it shows that as a diagnostic measure

the return of a solution in full is not conclusive evidence that there is no rupture of the bladder. Under similar circumstances again, where a not particularly difficult nor dangerous section would clear the diagnosis, I should certainly operate.

If only a part of the solution can be recovered it is however reliable evidence of rupture. If in addition to all of the solution being recovered the bladder, when more fully dilated with solution, can be felt through the abdominal wall to rise up behind the pubis in a pyriform or globular shape, thus showing resistance, I think the evidence positive that there is no rupture. Sometimes this last sign cannot be demonstrated owing to muscular, rigid abdominal walls protecting the lesion as the boardy feeling of the abdominal wall that frequently occurs in beginning appendicitis.

This may not occur for six or eight hours.

If we have not been able to satisfy ourselves that there is no rupture I think that we are not only justified, but that it is our absolute duty, to do an exploratory laparotomy to discover the exact condition of the bladder wall. I think that from neglect of this procedure many patients are lost, as the diagnosis is not made until too late for operation to be of benefit. When this exploratory laparotomy is done preparation should be made to do a curative operation as described later if indicated at the same time. If it is not indicated, little or no harm has been done by the exploration.

The prognosis in intra-peritoneal rupture of the bladder without prompt surgical repair is absolutely bad. There are undoubted and also very rare cases where from very prompt adhesions of the wall, the rupture being in a favorable location and the bladder not allowed to become distended, recovery does take

place; but to rely upon this in any case where the diagnosis was clear, or could be made so, would be criminal neglect of our patient's interests.

Also a blood clot may possibly close the rent until healing has occurred, at least the literature on the subject contains this hypothesis; but even if it could occur no one would take chances on it in any case. In practically all cases of intra-peritoneal rupture, not closed by operation, death will occur within a week from peritonitis.

In extra-peritoneal rupture there is a larger percentage of recoveries without operation, but not an encouraging number, most such resulting in death. The urine infiltrates the cellular tissues, phlegmon results and the patient usually succumbs to sepsis, uraemia or exhaustion, although the accidental establishment of drainage may occur and the wound heal by granulation.

The prognosis in cases that come to early operation, both extra and intra-peritoneal, is relatively good. It is good even in those cases of intra-peritoneal rupture where there has been considerable soiling of the peritoneum by the escape of sterile urine. If there has pre-existed infection of the bladder or urethra the outlook is naturally much graver, but not hopeless, nor precluding determined efforts at disinfection and repair. Rupture extending across the fold of the peritoneum, making it both extra and intra-peritoneal (such cases certainly exist), or where there are two tears, one without and one within the peritoneum, have naturally the risks of both forms.

My ideas of treatment have been pretty well outlined by what has preceded. Since the cases of McCormac, the tendency of the profession has been more and more toward operation, until now that sentiment is well nigh universal. In intra-peritoneal rupture a laparotomy should be done, and the breaks accurately



located, care being exercised that multiple tears are not overlooked. The wound should be closed with a double row of sutures placed close together (about one-eighth inch apart) and extending beyond the end of the tear a short distance. It may be necessary, before inserting the sutures, to trim the edges of the wound. The sutures should be of the Lembert variety, the outer row absolutely so; the inner row might not be materially harmed if a little of the mucous membrane were by accident included in making good apposition, as this is a barrier for the second row. I prefer the inner row of fine cat-gut, the outer row of fine silk, but here is where opinions differ. In case of doubt as to absolute closure after the insertion of the sutures, it can be tested by the injection of boric acid solution through the urethra. This measure might also disclose an over-looked puncture.

In anterior rupture, extra-peritoneal, I prefer to close entirely, just as in intra-peritoneal rupture, and if infiltration has not been extensive, make no provision for drainage, as the tissues will safely care for a small amount of urine. Even in case of considerable infiltration, I prefer to absolutely close the bladder and drain the cellular tissues by incision, or possibly a drainage tube. This, however, differs from most text-book methods, as they seem to prefer the establishment of a supra-pubic urinary fistula, leaving the same to granulate. I think absolute closure the completer, and likewise the safer method.

In neither case would I prefer the retention of a catheter in the bladder unless rendered necessary by stricture, which might cause too much violence in repeated catheterization. I would catheterize the first few days, whenever necessary, to avoid pressure from distension on the sutures—generally every eight hours.

In rupture at the base, a drainage tube should be inserted into the bladder through the perineum to drain the bladder until the rupture has granulated. This should be connected by tubing with a receptacle containing an antiseptic fluid.

Infiltration of the perineum should be relieved by suitable, perhaps multiple, incision.

During the treatment of any bladder lesion, which may be accompanied by hemorrhage or pus formation, the use of urinary antiseptics internally is something of a safeguard. Of these I prefer urotropin or salol. This with absolute quiet, a bland diet and attention to the proper elimination by the bowels is practically all the non-surgical treatment.

In conclusion, I wish to report a rather typical case, with operation, which is only unusual in the length of time intervening between the receipt of the injury and operation.

E. M. C., age 28, American, brakeman on coal train, of hardy but rather light physique, was caught between running-boards of freight cars and squeezed about pelvis, on January 25, 1906, at about 9 a. m., and was brought to St. Raphael hospital that night. Although there were some bruises, there was no evidence of fracture of the pelvis, nor did the subsequent course of the case disclose any. There was no great amount of shock. It was promptly demonstrated that solution injected into the bladder could not be withdrawn, or only a small portion of it. There was no blood, apparently, in the portion that was withdrawn. He was unable to pass urine. He stated that he knew his bladder must have been much distended at the time he was squeezed, as he had been conscious of a desire, without an opportunity, to urinate for two hours or more before receiving the injury. The diagnosis—rupture of the

bladder—was plain, and operation was accordingly advised. He would only consent to this on condition that it met the approval of some relatives who could not arrive until the next day. Persuasion being unavailing, I had to wait, with the result that having received the injury at 9 a. m on the 25th, the operation could not be done until 2 p. m of the 26th. By this time there was marked urinary infiltration on the under side of the penis, in the tissues of the scrotum and of the perineum, and the pressure in the cavity of Retizus was such as to accurately imitate to all physical signs an over-distended bladder. In fact, so great was this pressure that when a suprapubic incision was made into this space the urine escaped with great force, making quite a miniature fountain. It was found that there was a rupture nearly one inch in length extra-peritoneally, and a slight rupture of a few lines intra-peritoneally. The latter had caused soiling of the peritoneum, but without any evidence, either then or later, of any poisoning therefrom. In this connection I may say that it is often striking what exposure to normal excretions, as bile or urine, the peritoneum may withstand. The rents, one anterior and one slightly above, were repaired in the manner previously spoken of. The peritoneum was washed with normal salt solution and the bladder, peritoneum and abdominal wall were closed absolutely. The infiltration into the tissues below, not apparently threatening inflammation, was left to the care of the tissues, and did not give any trouble afterward.

There was, following the operation, neither fever nor evidence of uraemic or septic poisoning, and only the necessity of catheterization, which was rendered quite troublesome by the existence of an old stricture. Recovery was prompt, but owing to the rather extensive abdominal

wound, he was kept in bed three weeks. After this time he went to take a vacation in Texas before returning to work, but he was in good health.

#### Discussion.

Dr. Sol. G. Kahn: In opening the discussion, I desire to express my appreciation of the excellent paper which Dr. Espey has presented. He has covered the field so thoroughly that he has left no loophole open to discuss, and I only wish to emphasize the points that have been already brought out to reiterate the statements he has made.

The only thing that I would differ in any way from the opinion expressed is the wrong interpretation which the doctor has possibly placed on the text-books, and that is with regard to the amount of fluid which is introduced into the bladder, and the amount that is withdrawn. He stated that he introduced eight ounces of fluid into the bladder, and withdrew eight ounces of bloody fluid. If that fluid was quite bloody, there might have been sufficient hemorrhage at the time the fluid was withdrawn to make up the difference between the loss through a slight rent in the bladder and the amount of fluid which he had returned. While we know that practically ninety per cent. of all cases of rupture of the bladder die without operation, something like forty to fifty per cent. of them recover under operation, so that there can be no question but what it is imperative to operate all cases of rupture of the bladder. If there is a doubtful case, it is advisable to operate all cases of rupture of the bladder in preference to taking this desperate chance, when the operation is done under proper surgical conditions.

Dr. Sherman Williams: I did not expect to make any remarks on this paper, but Dr. Kahn emphasized the fact about the same amount of fluid being withdrawn from the bladder as was injected in a case of rupture as being one of the marked symptoms of this condition. There are some cases in which we find that this symptom would absolutely fail, and I have in mind a case which I saw in institutional work in town. The patient had had typhoid fever. He was in a debilitated lowered condition, and was at that time having subcutaneous injections of salt solution, and some salt solution by the bowel. The patient was taken with a sudden generalized pain, with marked collapse, and an increase in the pulse. A diagnosis at that time was

made of intestinal perforation. Some ten hours after the perforation I saw the patient, and on requesting an examination of the urine I found that the patient was passing enormous quantities of urine on his own volition, so much so that it was determined advisable to catheterize the patient every hour, and they obtained apparently from the bladder in the course of five hours something like 122 ounces of urine. The patient was in a marked debilitated condition and in such collapse that it was determined not to operate as he would not stand an anesthetic. He died. At the post mortem examination there was no rupture of the intestine found, but a rupture of the bladder about the size of a nickel. This case shows that we may have a rupture of the bladder without a loss in the amount of fluid obtained by catheterization, measuring the amount. This was simply a case where the amount of salt solution being thrown into the system was poured out into the peritoneal cavity and was simply obtained by catheterizing the peritoneal cavity. That is the only explanation I can give of it.

Dr. H. G. Wetherill: These cases illustrate some experiments done on dogs by Dr. Crile, of Cleveland, who succeeded in drowning dogs with salt solution introduced intravenously until they were dead, and then opening the abdominal cavity and finding a condition of intense edema, and drowning the dogs in their own serum. So it is possible to give too much salt solution.

Dr. Espey (closing the discussion): I have little to say in closing. The points emphasized by Dr. Kahn and Dr. Williams are the ones I wished to bring out in the paper. Some of the statements made in text-books as to the amount of urine withdrawn are absolutely misleading. While they give the indications, they do not exclude rupture, and owing to the limit of time in which operation can be done safely, or owing to the increased danger of deferred operation, it is necessary to make the diagnosis quickly, and those of us who have to depend or rely on our own resources should not be afraid to make a definite diagnosis by cutting down on the bladder and finding the condition, even if this does indicate that there is no rupture of the bladder. If there are several symptoms, we are justified in cutting down promptly to confirm our suspicion rather than wait until such time as our operation will be futile.

## *SURGICAL ASPECTS OF SOME DIGESTIVE DISORDERS FROM THE STANDPOINT OF THE INTERNIST.*

By JAMES RAE ARNEILL, M.D., Denver.

Countless sufferers from gall bladder disease, ulcer of the stomach and duodenum, and their secondary crippling effects upon stomach, bowel and pancreas, are daily being treated for bilious attacks, gastralgia and dyspepsia with small prospect of permanent relief and with the great danger of subsequent development of malignant disease of these organs; or at best, of extreme debility, neurasthenia and ill health from prolonged starvation and suffering.

Numerous cases of neurasthenia, suffering from nervous dyspepsia, hyperchlorhydria and the long train of symptoms dependent upon the frequently associated enteroptosis are being operated upon as cases of ulcer of the stomach. Or, as a last desperate chance, these miserable, worn-out nervous wrecks who have for years run through the long gamut of medical treatment by a dozen different physicians decide to resort to the court of last appeal, hoping to be either killed or cured by operation.

Unfortunately the majority of this latter class of cases are not relieved by operation, beyond a few weeks or months (psychic effect). In many the conditions are made worse, the neurasthenia exaggerated, new symptoms produced and discredit brought upon surgery.

Hence it is all important that an accurate diagnosis be made. By this is not meant the exact location or size of a gall stone or an ulcer—but a wise decision as to whether the conditions present will be helped or harmed by surgical intervention. An exploratory incision will often be necessary to decide this point, as in



many instances the most skilled and experienced diagnostician will honestly profess his doubt and inability to make an exact diagnosis. It requires a brave and conservative surgeon to refrain from a posterior gastro-jejunostomy when the abdomen has once been opened, and a prolapsed and somewhat dilated stomach disclosed, even when no obstruction is found. The internist can easily become excessively enthused over an operation like Moynihan's gastro-jejunostomy, with its brilliant results, in properly selected cases, and find indications for this operation too frequently; especially in neurasthenics with prolapsed stomachs who have long since worn out his patience; and in every ulcer of the stomach which he sees. Prolonged experience with operative cases, however, teaches him wisdom. The furore for stomach and gall bladder surgery of the past few years, has done more than cure numerous medically hopeless cases; it has taught the wise surgeon and the observant internist wherein success and failure lie. They both have become more discreet in the selection of cases for operative interference.

The cases which I have examined, studied, had operated, observed during operation, then followed and studied carefully for months or years, when possible, after operation, seem to convey the following facts and lesson: One must admit that few of us have seen or operated a sufficient number of cases on which to base accurate statistics. The cases in which the results have been positively brilliant, and in which the patients have been rescued from prolonged suffering and a miserable existence for themselves and families, and a shortened life, are those cases of dilated stomach, secondary to obstruction at the pylorus, or upper duodenum, with stagnation and fermentation of stomach contents and the attendant belching, vomiting, burning, pain and suffer-

ing, starvation and constipation. This obstruction may be due to peri-gastric adhesions, caused by gall bladder disease, and ulcer of the stomach and duodenum, or by the cicatricial contraction of an indurated ulcer or the presence of a malignant or benign tumor, or pyloric spasm caused by the irritation of an ulcer situated near the pylorus.

*Illustrative Cases.*—Pyloric obstruction, operated, case 1. F. F. L., educator, 55, Owatonna, Minn. Lost in weight from 230 pounds to 161 in past two years. He presented the classical signs and symptoms of dilated stomach, with stasis due to obstruction at the pylorus; food had remained in his stomach for three days. There was much distress and belching, and vomiting of obnoxious, sour and fermented material, and a resulting limitation of diet. On exposing the abdomen the outline of a greatly dilated stomach could be made out, extending one and one-half inches below navel, and of great transverse diameter. This fact was confirmed by inflation through the stomach tube. The taking of food relieved patient for few hours. Analysis of the stomach contents gave free HCl 40—total acidity 76. Slight excess of lactic acid. Yeast cells present, and a few long bacilli. There was a history of indigestion for the past sixteen years—with long periods of relief. There were severe attacks suggesting recurring acute ulcers, until three years ago; since which time he has had a constant recurrence of symptoms. There was very severe pain and tenderness in the pit of the stomach. The pain radiated through the gall bladder region and around to the back. Of late the symptoms have been those of stasis, dependent upon an indurated ulcer at the pylorus rather than those of an acute mucous ulcer.

He consulted many physicians, and his case was diagnosed dyspepsia, notwith-

standing the fact that he lived within fifty miles of the Mayos. On April 3, 1906, a Moynihan gastro-jejunosomy was done. There was a marked thickening and obstruction of the pyloric ring. No enlarged glands were found, and the diagnosis indurated ulcer of the pylorus with secondary dilation of the stomach confirmed.

On September 18, 1906, the patient wrote me as follows: "There have been no bad symptoms so far as I know. From the day I was allowed my first meal to this I have not suffered the least pain nor inconvenience from anything I eat, and I have eaten everything I desired, even raw onions, cucumbers, fruits of all kinds, green corn on cob, plums, bacon, salt pork, fried eggs, etc. I have no pain, belch a little gas once in a while, but that is getting less and less, no more now than people who think they have good stomachs do. In fact, I feel like a new man, as though I could do something. Have ambition, energy, and feel as though life were worth living.

CASE No. 2. Pyloric, obstruction. operated. F. W. H., male, 44, merchant. Small man, weight 110 pounds, emaciated but not cachectic. Has had trouble with his stomach since twelve years of age when he had an attack of jaundice; at present he complains of persistent vomiting, even bringing up food which has been in his stomach for three days. There is almost continuous belching of rotten gas, and a general distress over the epigastrium. Food often relieves for two or more hours, then the distress and other symptoms come on worse than ever. Sour, acid articles cause considerable burning and distress. The previous history of the vomiting of a black material, two years before, and a tarry, pitchy material tasting like ink three weeks before, with the symptoms of hyperchlorhydria caused me to suspect a gastric ulcer. The detection

of a very tender spot two and one-half inches above the navel—and the results of stomach analysis showing hyperchlorhydria, and hyperpepsia with microscopical and macroscopical evidences of stagnation—caused me to make a diagnosis of indurated ulcer of the pylorus, with secondary dilation of the stomach.

Operation revealed an old, atrophied, much-thickened gall bladder, containing several stones—with a mass of old inflammatory adhesions thrown around the pylorus, and firmly constricting it. The lesser curvature was so much thickened that the surgeon suspected malignant disease. Gall bladder and stones were removed, adhesions around the pylorus released—and to make assurance doubly sure, a posterior gastro-enterostomy was done,—with a Murphy button.

The patient has been in perfect health ever since, gaining many pounds in weight, having perfect digestion and leading an arduous business life with great comfort.

CASE No. 3. E. P., 60, pyloric obstruction, unoperated. A man of powerful physique, in health weighing over 200 pounds. He was examined first six years ago, at which time he had lost over fifty pounds from a chronic digestive trouble. His history and signs were very similar to those stated in the two preceding cases. Stasis, vomiting of large quantities of foul, fermented food, which had been in his stomach many days, continuous belching of foul gas, distress, burning, especially after eating sour articles, and emaciation due to starvation. A diagnosis of dilatation of the stomach (confirmed by inflation) secondary to obstruction at the pylorus was made, and a drainage operation advised. The patient refused to consider operation, so I advised daily stomach washing, restricted diet, alkalies and nux vomica. For four years the patient has daily washed out

his stomach—by swallowing large quantities of warm soda water, and then vomiting it. He writes as follows concerning his condition: "I am still rinsing my stomach once per day, as I have done for the past four years, at 5 p. m. Thus I get the benefit of what I eat. I live on soft boiled eggs, toast, grape nuts and Postum coffee and in this way I am not distressed, and am as comfortable as any one, and have made a handsome gain of twenty-eight pounds." This patient would have been perfectly relieved by a successful gastro-enterostomy. As it is he will in the end probably be compelled by the gradual constriction of the pylorus to undergo operation. The possibility of cancerous degeneration must also be considered.

A second group of cases in which operative results are often satisfactory are patients suffering with frequent exhausting hemorrhages and cases of recurrent ulcers, which may have once healed, as a result of careful medical treatment, and then again become active, or in which new ulcers have developed. This may happen a number of times during the course of several years. Finally the symptoms become very much exaggerated, and are very persistent. The patient, if poor and a laboring man, who cannot afford to be an invalid, desires a treatment which gives him a better chance of permanent cure, and turns to surgery. In such cases the results are often all that could be desired.

Though many authorities wisely advise radical medical treatment in the acute mucous ulcers—which are finally diagnosed, and brought to a climax by the occurrence of that dramatic event in the course of many such cases, a hemorrhage, still operative experience proves that many cases improve with great rapidity after a posterior gastro-jejunostomy, and are able to eat a great

variety of food without symptoms, and regain their strength much sooner than after a medical cure, but we must not forget that the mortality of gastro-jejunostomies is not a trifling matter. Results should be strikingly better to cause us to favor operative over medical treatment.

*Illustrative Cases.*—Case (a) G. F. M., a well-developed man of twenty-four. Law student. Six years ago patient had symptoms and signs of gastric ulcer, and was treated for these things medically, with apparently good results. All symptoms disappeared for over a year. The symptoms of the trouble then appeared and disappeared several times. They had been persistently present and severe until July, 1905, when he had an attack of lead colic in Leadville. At present he has pain of a gnawing, griping character in epigastrium, as well as persistent burning and discomfort, and occasional vomiting. The pains are relieved by pressure, or milk, or sodium bicarbonate more than by morphia. Vomiting relieves the pain for two or three days. He is leading a miserable existence, and sodium bicarbonate is his constant companion by night and by day. Analysis of stomach contents showed free HCl. 85, HCl. combined 8. Organic acids and acid salt 7. Total acidity, 100.

A posterior gastro-jejunostomy was done with complete relief of all symptoms, and ability to eat all kinds of food.

The patient writes from a logging camp in Washington: "There is a decided improvement in my case. I am having better health than at any time in my life; sleep well, eat well, have not vomited since I was operated, have no bile, no acid, and no trouble with my bowels. I am five pounds heavier than ever before. I can eat anything they put before me. Can sleep twelve hours without lying on a pillow, and enjoy life much more than I did before."



Another type of case about which there must always be a good deal of uncertainty is the neurasthenic, enteroptotic patient with an atonic stomach, whose nervous symptoms are really dependent upon an ulcer of the stomach or duodenum, or gall bladder disease. Refusal to operate such a case might doom her to many years of indescribable suffering and untellable agony.

If we bear in mind that cases of enteroptosis very frequently develop gastric ulcer, we will less frequently make the remark: "Oh, she only has an attack of neurasthenia or hysteria."

Case (b). W. F. M., mining man; forty. This patient came into my office immediately after his return from a most strenuous and trying mining trip, looking pale as a sheet and weak as the proverbial rag. He had spent two weeks in the mines of Wyoming and Idaho, staging many miles, riding horseback long distances, climbing up and down shafts and mountain sides, and all the time passing enormous quantities of tarry material by the bowels, and time and again reeling and almost fainting from dizziness and weakness. He had been told that he had liver trouble, and so supposed he was passing bile. His hemoglobin was 30 per cent, and he complained of nothing but weakness. However, a few questions brought out the fact that he had on several occasions during the preceding weeks, fainted, after going to stool and passing large black evacuations. He had also taken treatment for his stomach, because of pain in the pyloric region, and burning between meals and inability to eat sour articles. Many physicians would have advised radical medical treatment. We decided that another severe hemorrhage would kill the patient, and took the risk of having a posterior gastro-jejunostomy done. He stood the operation well and was home

in two weeks. Has since been eating everything, even lemon pie, without distress. He is rapidly making blood and his hemoglobin will soon be up to normal. True, this patient would probably have gotten well under medical treatment.

Case (c). Mrs. E. C., thirty. A miserable, cachectic, hopeless invalid and a confirmed neurasthenic, who has been vomiting after every attempt at food for months. There was almost continuous nausea. She complained of pains in the lower abdomen and back, worse at monthly period. Her various symptoms were supposed to be due to an ovarian trouble. I advised operation with considerable hesitation, because of her very pronounced nervous symptoms. Most of the physicians and nurses associated with the case looked upon the patient as a hopeless nervous wreck. Examination demonstrated a prolapsed and dilated stomach, and a moderate hyperchlorhydria. On the suspicion that the symptoms might depend on an acute mucous ulcer, although not positively demonstrated, a drainage operation was advised.

Results were marvellous. Vomiting ceased immediately and in three weeks the patient was up and around, eating everything without distress, sleeping well, and strikingly relieved of her nervous symptoms. She was soon doing all her household work. It was one of that very large class of doubtful cases where the exaggerated neurasthenia developed as a result of a gastric ulcer.

#### OPERATIVE CASES WHERE RESULTS WERE UNSATISFACTORY.

Several of my cases have not been cured by gastro-jejunostomy, but may have been made worse in some instances. The failure to secure permanent relief may have been due to faulty technique or to unavoidable abdominal complications, such as adhesions or to poor selection of

cases. One such case is a man of forty-three, tall and slender, with a moderately prolapsed, atonic stomach, but no organic obstruction at the pylorus (occasional stasis of food). Another was a very nervous young woman of twenty-eight, who had suffered for many years with the severe dyspeptic symptoms associated with marked enteroptosis (right kidney, stomach and bowels), and decided hyperchlorhydria, and frequent stasis of food. In both of these cases there has been an almost constant regurgitation of bile into the stomach, shown by vomiting and stomach washing. In one this was due to the fact that the loop was turned to the right, and that there were adhesions beyond. An enteroanastomosis has been done, and the regurgitation of bile has ceased. In the second case I have advised an enteroanastomosis, but the patient belongs to that large class of enteroptotics with atonic stomachs, and I fear that she will always have dyspepsia and nervous symptoms.

A third unsatisfactory case (young woman of twenty) typical acute ulcer of the stomach, with hemorrhage operated by a young inexperienced stomach surgeon, chosen by the family. In this case the poor results may be dependent upon faulty surgical technique. A Murphy button was used. The patient, however, improved greatly for a few months, gaining thirty pounds, and becoming able to work. Then the ulcer symptoms returned with renewed severity, and an X-ray picture was taken to find the button, which had not been passed. It was located supposedly at the pylorus. A secondary operation failed to locate the button, or the anastomosis opening. A posterior gastrojejunostomy and enteroanastomosis with suture were now done by an experienced surgeon.

Some nine months later the patient wrote as follows: "I haven't a very good

report, as I certainly have suffered at times and often, too, with the same symptoms which I had before last operation. I still have vomiting spells, vomiting perhaps once or twice and sometimes three times a day for a week or ten days steady, and suffering great pain at that time. It may then be two or three weeks before I have another spell. I have gone five weeks without vomiting. My weight is the same as before my last operation. When I am feeling well I can eat without distress, but when I have a vomiting spell I can't eat anything." Medical friends report recurrence of hemorrhages, in certain cases, following gastro-enterostomy.

Two other patients did less well than these, as one patient died three days after operation, apparently from acid intoxication, following chloroform anesthesia, and the other died nine days after operation from exhaustion and persistent vomiting of small quantities of dark blood.

#### DIAGNOSIS OF ULCER OF THE STOMACH AND DUODENUM.

In a certain percentage of cases the occurrence of an undoubted hemorrhage from the stomach and duodenum shown by vomiting of blood, or melena, renders the diagnosis comparatively easy, if associated with the other symptoms and signs. In a larger percentage of cases one can not depend on this simple guide, as it has not occurred, or has escaped detection. An accurate comprehensive history of the present and previous diseases frequently furnishes sufficient evidence for a diagnosis of ulcer. Physical examination and laboratory findings complete the chain of evidence, for or against ulcer. Even then we may be dealing with a case of gall bladder disease or nervous dyspepsia. The signs of an old indurated ulcer and those of an acute mucous ulcer are, of course, very different. In the former we find chiefly evidence of stasis with a

preceding history suggesting acute mucous ulcer. The patient often begins to run down, loses weight, becomes anemic and develops symptoms of hyperchlorhydria; feels well until two or three hours after meals, when burning, pain and gas manifest themselves. These symptoms are relieved by further eating, or by taking alkalies, if it is simply hyperchlorhydria. Orthoform in 8 grain doses often relieves the pain of ulcer. Later on the taking of food may immediately cause pain followed by vomiting, which gives relief. There is likely to be a localized tender area in the epigastrium. Pain may or may not run through to the back. I have seen undoubted cases of gall stone (proved by operation) which have complained of this radiating pain while in undoubted cases of ulcer of the stomach it has been absent.

Analysis of a test meal almost always shows a hyperchlorhydria. However, this fact may be misleading, as I have frequently found hyperchlorhydria in gall bladder disease. Examination of the stools for occult blood and the stomach contents for occult and fresh blood has a limited field of usefulness. A small amount of fresh blood is often present in the stomach contents caused by the irritation of the stomach tube. For the general practitioner whose patient is not in the hospital, it is almost useless. If the patient can be kept in a hospital, and the diet properly controlled, it may or may not prove a very useful aid in diagnosis. Demonstration of the size, position and shape of the stomach by inflating with air through the stomach tube, is important in chronic cases. Effervescing powders are often used, but are more dangerous and less instructive. The easiest and surest method of determining stasis is to wash the stomach out thoroughly in the morning before breakfast,

the patient having eaten a fairly large meal the night before. The presence of lactic acid, yeast cells, sarcines and Opller-Boas bacilli is also good evidence of food stagnation. Advice for or against operation should depend in most instances on whether stasis is due to mechanical obstruction of the pylorus or to the temporarily weak musculature of the stomach, as in atonia gastrica, or is dependent upon the malposition of the organ as in extreme cases of gastroptosis, or enteroptosis.

If an experienced, capable stomach surgeon had been selected, the decision upon the kind of operation to be done should be made after the abdomen has been opened, and the actual pathology determined by careful inspection and palpation. It may be a posterior or anterior gastro-enterostomy, with suture or button; it may be an excision of the ulcers or ulcer-bearing area, or a plastic operation on the pylorus, or even a resection of most of the stomach. Occasionally it will be a gall bladder or appendix operation, instead of a stomach operation, as expected. Again it will be simply sewing up the abdomen. There should not be a predetermined decision to do a gastro-enterostomy, no matter what the findings are.

In conclusion, I wish to urge upon all physicians their unbounden duty to insistently and persistently recommend and advise exploratory operations, when a conscientious, intelligent and scientific examination of a serious case leaves doubt as to the diagnosis and treatment. This recommendation will apply most often to dyspeptic cases, in which there is a suspicion of cancer; also to obscure conditions in the right hypochondrium in which gastric ulcer and gall bladder disease are suspected, but not proven. The dangers of exploration are much smaller than those of procrastination. Thousands of



lives will be saved—awful suffering assuaged and the sum total of human happiness wonderfully increased, when the exploratory incision becomes the routine practice in such cases.

#### Discussion.

Dr. William B. Craig: I shall have very little to say relative to this subject, because of my comparative inexperience. I, like most surgeons, have these cases referred to me for operation. The reason for operation is usually an important matter to determine, and when we have reached a decision to operate, it is up to us to make at least an exploratory incision. No one can help but form prejudices relative to any such object, and it seems that I have formed a prejudice along a line a trifle different from others, yet it appeals to me as reasonable. I look upon the modern operation of gastro-enterostomy, with rare exceptions, as nothing more or less than a crippling operation. A clean-cut surgical procedure to remove the focus of disease, wherever it may be, appeals to me, as, for instance, a pyloroplasty for the relief of ulcer by excision, or for the relief of dilatation by some form of plication, or the relief of carcinoma by radical extirpation.

In a statement I made two or three years ago I placed myself on record as saying that an ideal operation is along the line I have just mentioned, namely, complete eradication of the focus, wherever it may be; complete surgical excision, albatation, or removal; resection of the stomach, partial or complete, when dealing with that organ.

An unfortunate feature of this radicalism is the degree of mortality, as we know the operation of gastro-enterostomy is attended with a high death rate. Partial gastrectomy, more or less complete, is attended with danger and a high mortality, so that we are hampered in the beginning of the case, in that we are confronted with a subject who is advanced in cachexia, malnutrition, or anemia. Nearly all of these subjects that have a palliative operation are subjects of malnutrition, only they vary in degree. It seems the part of wisdom, therefore, to do a minor operation, if possible. While we may be able to relieve the stomach symptoms, in addition to that we are confronted with post-operative adhesions, kinks, etc., that render a second operation necessary—entero-anastomosis. While gastro-enterostomy is a popular surgical procedure, and can

be done by students in the desecting room, it is not an operation which is uniformly attended with brilliant and satisfactory results as the other procedures that have preceded gastro-enterostomy in public favor.

Dr. Arneill's paper certainly covers the ground as to the character of cases that are amenable to treatment by this one operation. It is really the operation under consideration in his paper. I am not in a position to determine in a given case that is referred to me as a surgeon whether the patient should have stomach work or not. I refer him to the internist, and if he alone is not fully competent to determine this matter, he should get together with the surgeon and then both can decide what is the right procedure to undertake in a given instance.

The mortality is certainly considerable, even from gastro-enterostomy. Patients are illy-fed, and most of them are the subjects of auto-intoxication before we administer the anesthetic. Nothing is better than chloroform for these cases, provided the anesthesia does not last over an hour. If it exceeds that time, the anesthetic should be changed.

Like Dr. Arneill and others, I have found the persistence of acetone and diacetic acid long after the case was surgically convalescent, and yet in the majority of cases this has been of no real moment.

Dr. Arneill (closing the discussion): Great responsibility rests with the internist and surgeon in deciding which cases should be operated. We must appreciate the fact that the mortality is quite high from this operation. We must realize that a large percentage of the cases that come to us are neurasthenics with prolapsed stomachs or kidneys, spleens and liver; and that in many of them the neurasthenia is made worse by operation and thus discredit is brought on surgery. Keeping in mind such cases as I have cited, that neurasthenics can have ulcers, remember that if we refuse to operate on them we may doom a number of these patients to suffering and untimely death. We should make an accurate diagnosis, if possible, and in cases of doubt resort to exploratory incision. Let me cite an illustration in this connection. Two years ago I examined a patient who gave indefinite symptoms of dyspepsia. I could not say whether the man had beginning cancer of the stomach or chronic gastritis, with reduced acid, pepsin, and lab ferment. I advised an exploratory operation. He had a certain amount of free hydrochloric acid with

pepsin. An exploratory operation was undertaken. The surgeon felt the pylorus and was in doubt as to whether there was anything abnormal there or not. It was decided to rely on the advice of the internist. Accordingly, the pylorus was resected; the surgeon also did a posterior gastro-enterostomy. The mass from the pylorus was sent to a pathologist and was found to be carcinomatous. That man was heard from two or three days ago. He has been working and is well.

I recall another case in which we were able to feel a tumor the size of an egg involving the pylorus. We recommended operation, with the idea that the mass might be circumscribed, with no secondaries. The patient was operated, and sarcoma of the pylorus was found. He has been well for seven years. This case was cured by the operation.

Another case will illustrate the importance of early operation in gall-bladder work. We recently examined a patient who gave a history of gall-stones extending over twenty years. She had refrained from operation for many years, until a few weeks ago, when both the internist and surgeon told the patient she had gall-stones. The surgeon was wise and said to the husband that there was also a possibility of carcinomatous degeneration. Operation was done. Cancer of the pylorus and posterior part of the gall-bladder, with gall-stones, was found. Had the patient been operated a year or two ago the irritation set up by the prolonged presence of gall-stones would not have occurred, and she would have been saved. This is one of the results of delayed operation.

### DIAGNOSIS OF OPERATIVE STOMACH CONDITIONS.

By J. N. HALL, M. D., Denver, Colo.

The following conditions may call for the aid of the surgeon in gastric disease:

1. Presence of foreign body.
2. Wounds of the stomach.
3. Gastric fistula.
4. Perigastric abscess.
5. Phlegmonous gastritis.
6. Congenital hypertrophic stenosis of pylorus.
7. Congenital atresia of pylorus.
8. Perforation in gastric ulcer.

9. Hemorrhage in gastric ulcer.
10. Chronic gastric ulcer.
11. Dilatation of stomach (a, acute); (b, chronic).
12. Hour-glass stomach.
13. Malignant growth of stomach or its orifices.
14. Non-malignant growth of stomach or its orifices.
15. Gastropotosis.
16. Hyperchlorhydria.
17. Reichmann's Disease.
18. Gastralgia.
19. Tetany.

Foreign bodies, wounds of the stomach and gastric fistulæ demand but little from the internist, and we shall leave them to the surgeon.

Perigastric abscess commonly results from wounds, perforation of an ulcer, of a cancer, or from a foreign body. The chills, fever, vomiting, pain, tenderness, etc., rigidity, abdominal dulness on percussion or resonance if air be present also, leucocytosis, local redness and edema, commonly lead to a correct diagnosis. Pleurisy, pericarditis or empyema may result.

In a recent case seen with Drs. Lemen, Fleming and Taylor, the pus evacuated was extremely offensive, apparently from colon bacillus infection. Many other pathological processes around the stomach originating in the gall bladder, esophagus, pancreas or other organs may give rise to abscess here. Sub-phrenic abscess is more common than the superficial one in the left hypochondrium, while abscess in the lesser peritoneal cavity probably holds an intermediate place. My experience leads me to say that time and careful study are often necessary to the diagnosis.

Phlegmonous gastritis is so rare that few of us will ever see a case. The symptoms of an intense gastritis are present with those of septic infection superadded.

Pus is occasionally vomited, though Robson and Moynihan say not. The patients commonly die of general peritonitis and exhaustion with little possibility of a correct diagnosis unless early operative intervention has been called for.

Congenital hypertrophic stenosis is rare. In a recent case seen with Dr. Bartholomew, and operated upon by Dr. Lyman on the fourth day of life, diagnosis was based upon the constant and violent vomiting, wasting, dilatation of the stomach, lack of any passage of feces, in spite of cathartics, and rapidly approaching exhaustion. The tumor upon which the diagnosis has generally been based was not present, and evidently is not essential to the correct diagnosis. The perfectly firm and distinct thickening, closing the pyloric orifice, did not rise to the dignity of a palpable tumor in this case. Absence of bile in the vomit, the unchanged character of the food ingested, the presence of peristaltic waves over the stomach, and the flattening of all of the abdomen except that portion occupied by the stomach, are further points in the diagnosis.

Congenital atresia could scarcely be distinguished from the last condition, but should be operated upon early by gastro-enterostomy if detected.

The indications for operation in gastric ulcer are as follows:

A. *Perforation*.—The indications are imperative. Overwhelming pain, generally with a history of gastric disease, the rigidity of the abdomen, exquisite tenderness, collapse, anxious countenance, shallow respiration and thready, rapid pulse, with signs of gas in the peritoneal cavity, mark the acute perforation. The sub-acute and chronic cases are less sharp in outline, but generally capable of diagnosis. The rent must be repaired as soon as the diagnosis can be made, and generally a gastro-enterostomy done to pro-

mote the healing of the ulcer. The differential diagnosis must consider all of the acute abdominal troubles, but especially tubal pregnancy and appendicitis. At the beginning of menstruation, attacks occasionally occur which mimic perforation of gastric ulcer without any perforative lesion anywhere.

Care must be used not to give these patients much morphine, since it clouds the diagnosis and may make the patient so comfortable that he cannot see the urgency of the need of operation. The perforation may perfectly well be anticipated and forestalled in a few cases, if one pays particular attention to the localized peritonitis generally seen in advance of a complete perforation. Dr. Freeman has recently successfully operated in one such case for me, where we felt sure that perforation must occur shortly.

B. *Hemorrhage*.—If severe bleeding be not arrested with reasonable promptness by the usual rest and medical measures, including the administration of adrenalin, and lavage with very hot water, we must believe that a large vessel is perforated, and resort to operation; gastro-enterostomy frequently relieves the trouble promptly, though more extensive intervention may be necessary.

C. *Chronic or relapsing ulcer*.—The danger from such a condition, and the failure to cure by medical means, warrant our advising a gastro-enterostomy. This gives rest to the portion of the organ usually involved, and relieves the hyperchlorhydria, and is, in general, very satisfactory. Excision of the ulcer is not generally necessary.

Dilatation of the stomach may be (a) acute; (b) chronic.

The former, a not infrequent sequel to operations upon various abdominal organs, may be relieved by washing out the stomach, using a tube stiff enough to pass the cardiac orifice even though spasm be



present. If no relief can be obtained otherwise, a jujenostomy is thought by the surgeons mostly likely to give relief. The condition is very serious.

Chronic dilatation most commonly supervenes upon the healing and consequent contraction of chronic ulcer near the pylorus. If the patient fails to obtain relief by washing out the stomach and relieving the associated gastritis, gastro-enterostomy should be done before the general strength is reduced seriously. We should note that the symptoms and signs may equally as well point to an acute ulcer as to the scar of a healed one. In a recent case the evacuation of an Ewald test meal brought forth three quarts of decomposing food, yet the patient had nearly bled to death on several occasions just before. The ulcer was of twenty-five years' duration, yet had never healed in a permanent manner, as we learned at operation. I have had four cases operated upon within a year in which no history could be obtained pointing to ulcer, unless a slight, and not very persistent acid stomach could be incriminated, yet all showed the scar of an old ulcer. Although I have much oftener found a definite ulcer history, I mention this to establish the fact that absence of history of ulcer should not in the least invalidate a diagnosis of pyloric obstruction of non-malignant nature.

Dilatation from adhesion about the pylorus, from kinking of the duodenum by a floating right kidney, from spasm and hypertrophy of the pylorus remaining after an ulcer has healed, from cancer, or any other cause, demands relief by gastro-enterostomy if not helped materially by medical means. If cancer can be excised with reasonable safety it should be done. In a case recently seen with Dr. Lyman, a cancer the size of the fist closed the pylorus and a gastro-enterostomy was done. The patient gained nearly twenty

pounds in weight and has been infinitely more comfortable since. Our only hope in case of gastric cancer is in early diagnosis, and in exploration when a reasonable suspicion exists of its presence. We must not wait to be too sure of the diagnosis if we hope to cure tuberculosis of the lungs by sending the patient to a favorable climate, or cancer of the stomach by operation. Non-malignant growths should be investigated early if any symptoms show serious interference with the process of digestion.

Hour-glass stomach, caused in general by adhesion, cicatricial contraction or cancer, and recognized by dilatation of one or both compartments, by the apparent disappearance of water introduced in washing out the stomach, or by the finding of the contents of the second compartment in the wash-water after the first one has been washed out, or the paradoxical dilatation of Von Eiselsberg, in which splashing and other signs of dilated stomach remain after it is supposed to have been washed out, may be relieved by gastropasty or gastrolisis in many cases.

Hyperchlohydria, persisting, extreme, and not relieved by medicine, would demand gastro-enterostomy, with fair prospect of relief, and little danger. The same may be said of Reichmann's disease.

Gastropexy has been done for gastrop-tosis and the stomach has been suspended in the great omentum. I cannot speak of these operations from personal knowledge.

Gastralgia has been relieved by gastro-enterostomy after all other means had failed. We should beware of this diagnosis unless all others fail us. Tetany of gastric origin, especially in connection with dilatation, should be treated by the same operation if not doing well under medicinal treatment.

Of operations involving the stomach in private cases seen chiefly in the past

eighteen months by me, and operated by ten different surgeons of Denver, thirty-five were gastro-enterostomies.

The operation was for: Scar of old ulcer in the pylorus, producing stenosis and dilatation, twelve times; active ulcer of stomach or pylorus, eleven times; cancer of stomach, four times; atony of stomach wall without obvious cause, two times; adhesions about scar of old ulcer, two times; perforation of gastric ulcer, two times; chronic gastritis with hemorrhage, once; congenital stenosis of pylorus, once.

#### Discussion.

Dr. A. R. Pollock: The troubles of the stomach that require operation may be put briefly as: The presence of foreign bodies, rupture, perforation, gastric ulcer, and stenosis of the pylorus from tumors the result of ulcer or cancer; that is, foreign bodies, perforation, obstruction of pylorus, ulcer or cancer. I understand that it is generally conceded an acute ulcer does not really require an operation, but rest and feeding. A patient suffering from hemorrhage from an acute ulcer is usually in a very bad condition for gastro-enterostomy or excision; but cases of chronic ulcer resisting medical treatment are certainly in line for gastro-enterostomy.

There is not much I care to say about this, but one thing in particular, and that is in regard to cancer of the stomach, which occurs always in the region of the pylorus, and I would like to say this, that at present the operation for cancer of the stomach has advanced to such a degree that if an experienced surgeon could get the case early enough, that the patient's suffering would be lessened, and a considerable number saved. When we consider that without operation one hundred per cent. die, we should certainly see to it that the diagnosis of these cases are made early enough and that they go to the expert surgeon. This matter lies to a great extent with the general practitioner, and the general practitioner who gets a case past thirty-five with indefinite stomach symptoms usually has in mind cancer of the stomach; I mean the chronic case. He should look after it, arrive at it by exclusion, not wait until he has made a positive diagnosis. Call in a surgeon to aid him in the diagnosis; do it early enough, and if the patient could be prevailed upon to submit to an exploratory operation, which, if it

proves negative, would do no harm, a considerably larger percentage of these gastric cancer cases could be saved by proper diagnosis of the stomach. I would like to quote from W. J. Mayo, March, 1906, *Journal of Surgery, Gynecology and Obstetrics*: "Laboratory methods avail little in the later stages," speaking about the diagnosis of gastric cancer, "avails but little in the early stages. An early clinical observation and final exploratory incision of the suspected organ are our best guides."

Dr. A. S. Taussig: I believe that is a fine paper of Dr. Hall's, and should be freely discussed. In the next ten years no doubt there will be many more operations performed upon the stomach than have been in the last. We are getting very enthusiastic about stomach surgery now and a great many mistakes are going to be made. After listening to our present chairman's valuable paper of yesterday, I believe the point should be impressed that with the enthusiasm our care should be increased. I wish to make three points in bringing up this discussion. That is, first, observation in these cases; secondly, the dangers of a false diagnosis following physical tests, or clinical tests, so to speak; and, third, that the diagnosis fails if you do not take sufficient history. I believe that in all of these cases speaking on the first point—that are of sufficient gravity to justify an operation, the patient should be taken to the hospital for weeks, even for months, and carefully observed before the operation is performed. I am speaking only of course of the chronic cases. Many a time, I believe if these cases would be taken to the hospital, carefully observed by an intelligent nurse who knew how to take notes, which very few do, the case could be readily diagnosed, and the operation could be performed with more confidence by the surgeon, and less trepidation experienced by the man who advises the operation. Secondly, in regard to mechanical or physical means. A case came up two years ago that I thought I examined very carefully. The man had lost greatly in weight, and had all the physical signs of a cancer present, and I passed the stomach tube on the man, dilated his stomach with compressed air and examined him. There was some one present with me, and I showed them how nicely dilation worked, and what an enormous dilatation of the stomach there was. The man was then sent to the hospital, was operated on, and I believe the stomach was about the size of two

fists, and no one could have dilated that stomach under heavy pressure. The air passed out of the pylorus into the intestines and certainly resembled a dilated stomach. That is among the errors that may take place in the use of the stomach tube. I also wish to say that the liability with the younger men especially is asking for an operation in cases of chronic gastritis where there is no hydrochloric in the presence of the lactic acid, which is certainly going to be disregarded in the coming years more than in the past. The absence of HCl in the presence of lactic does not justify an operation. The third point that I wish particularly to refer to, is that these cases come on in later life, business men particularly, where there is an enormous loss of weight, very little, if any, HCl, perhaps no rectal trouble, perhaps a little. These cases are sometimes emaciated, perhaps lose fifteen or twenty pounds in a month or six weeks. I have watched some cases who have lost more. Many of them are due simply to the man having financial trouble. If these cases are taken to the hospital, the man carefully questioned and examined, they would not go to the operating table, as many of them no doubt do. In the paper by Cabot I believe there were a number of points brought up in regard to the loss of weight, and emaciation. One of the important ones I believe he spoke of was arterio-sclerosis—these old men that are troubled with arterio-sclerosis—men losing their weight quite rapidly are very apt to be sent to the table without justification.

Dr. C. D. Spivak: The paper by Dr. Hall is certainly very complete as far as the present day and generation is concerned. However, I am more optimistic than Dr. Taussig as to the future. I see a very bright future around it for the internist and the surgeon. I say there is certainly a very bright outlook, and the paper by Dr. Hall is absolutely right as to the future; we can see a following that will agree in this. Most of the operations on the stomach are those of ulcer and cancer. Cancer at the present time, at least some of those very kind and careful observers have brought out the fact, that a cancer always arises upon the site of an ulcer, and therefore the early recognition of an ulcer would be the means of preventing such a case coming to the operating table. And how is it to be prevented? We can see already a great deal of light within the last few years. What cannot be recognized macroscopically or microscopically can now be recognized chemically

by very simple tests, and this test has been very beautifully elaborated by Dr. Douglas Steele, of Philadelphia, and therefore I fully agree with the outline of Dr. Taussig that cases—chronic cases—should be sent to the hospital and watched, put upon a careful diet, which will show in the examination of the feces whether there is any blood, and if there is blood, the case is an ulcer and should be treated medicinally as early as possible, so that it will never come to perforation, nor come to be a cancer on the site of an ulcer.

Another point in connection with the operation of the stomach is this: It always happens that when one describes certain symptoms of a new disease which he has discovered, and he sees that nobody knew them for centuries—once a man has described it this way, then every other man observes it and describes it, and knows of a number of cases—the same as appendicitis and all those things not known twenty-five years ago. Now there is another indication for gastric surgery, and it is characterized by a sudden onset of severe, excruciating pain, vomiting, inability to retain any food at all, and a great deal of bulging of the upper part of the abdomen, a tumor-like bulging of the abdomen. I have brought this before the society before, some three years ago, and it seems to me that I was the very first one of the physicians to work out the literature. I have never seen a case myself; neither do I know of anyone in the United States who has seen it, but it was described in the German and French papers—this volvulus of the stomach, sudden twisting of the stomach around its axis, just the same as the volvulus of the intestines. Now that is a certain indication for surgery of the stomach, and the surgical procedure is a very simple one. All it needs is simply opening the abdomen and with the trocar, let out the air, and the stomach will right itself.

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Two or three drops of fluid extract of Jamaica dogwood (*Piscidia Erythrena*) in a teaspoonful of water is said to be a specific in whooping cough.

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Care should always be taken to examine per rectum a case in which it is difficult to determine whether the symptoms complained of are caused by prostatic trouble or seminal vesiculitis.



# Progress of Medicine

## INTERNAL MEDICINE.

EDITED BY

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### A CRITICISM OF THE USE OF POTASSIUM IODIDE FOR DIAGNOSTIC PURPOSES IN PULMONARY TUBERCULOSIS.

Landis, (*Therapeutic Gazette*, April, 1907), experimented, at the Phipps Institute, on rabbits that had been artificially infected with tuberculosis and was unable to detect any unfavorable action upon the process, but he recently had a patient in the hospital for treatment of gastroptosis, and, finding upon routine physical examination suspicious signs in one apex, he gave potassium iodide, grs. V every three hours, to determine the cause of the signs. The temperature which had been normal during her stay in the hospital, rose on the third day of the potassium iodide treatment; cough developed, sputum appeared with tubercle bacilli in it, rales appeared throughout the upper lobe and the case, which was evidently latent, grew rapidly worse.

He believes it should not be used unless it is impossible to make a diagnosis otherwise, and then with caution.

O. M. G.

### SOLUTION OF MAGNESIUM SULPHATE LOCALLY.

Tucker, (*Therapeutic Gazette*, April 1907), has used this with great satisfaction, as a local antiphlogistic in the following conditions: Orchitis, epididymitis, nonsuppurating buboes, synovitis, articular rheumatism, one case of tuberculous peritonitis, gonorrheal rheumatism, facial erysipelas and alcoholic and traumatic neuritis.

He uses a hot saturated solution and

applies it on fifteen to twenty thicknesses of gauze, adding solution every half hour, or oftener if necessary, to keep it thoroughly wet, but does not remove the gauze for twenty-four hours; at that time the parts are washed with water and the solution reapplied. In almost every instance the relief of pain was marked.

Attendants who made the applications complained of a partial loss of sensation accompanied by tingling of the hands and forearms for twelve to twenty-four hours.

O. M. G.

### THE MICROCOCCUS RHEUMATICUS.

J. M. Beattie, (*Journ. Ex. Med.*, March, 1907), has made a detailed study—principally from a bacteriological point of view—as to the identity of rheumatic fever and pyemia.

*Micrococcus rheumaticus* (Wasserman) and *streptococcus pyogenes* were identical as to morphological and cultural characters except that the former produced acid and precipitation of bile salts in McConkey's bilesaltlactose broth, while the latter did not. The former also exceeded the latter, by far, in point of viability.

Large numbers of rabbits were inoculated with each; the streptococcus—of which he used twelve different strains from as many sources—almost always produced metastatic abscesses, articular or otherwise; in only one case caused an endocarditis and the organism was frequently cultivated from the blood, while the other, in most instances produced either an arthritis or vegetative endocarditis, *never* produced pus, was never reproduced from the blood and only with difficulty from the effected synovial membranes and endocardial vegetations.

He raises strenuous objections, also on clinical grounds, to the diseases being considered identical or rheumatism an at-

tenuated form of pyemia. The former even when most severe seldom suppurate while the latter is necessarily suppurative, even if ever so mild.

He considers that the infectious nature of rheumatism no longer requires defence as that has been proven to the satisfaction of all. He has recently held four autopsies on subjects dead of pure rheumatism, all of which showed amyloid degeneration and it is pretty generally conceded that this is one of the results of infection.

O. M. G.

#### TYPHOID SPINE.

Mac Rae, (*Johns Hopkins Bul.*, April, 1907), discusses its salient points, which are as follows: The condition generally comes on in convalescence, not later than three months after the attack, pain and emotional disturbances are its most marked features. There is a distinct tendency to recovery and sensory symptoms are always present.

Gibney, who first described it, in 1889, considered it an inflammation of the articular structures of the spine, but opinion has been very much divided as to whether it is an organic or functional condition.

In favor of the latter view were the facts: The condition was one of symptoms only, the patients *always* get well and suppuration never occurs—while in typhoid lesions it generally does. Later, however, there have been reports of conditions which were strongly suggestive of organic change, such as local signs of inflammation, kyphosis, lateral curvature, wasting in the lower extremities, changes in the reflexes and in sensation. He now follows with the reports of two recent cases from that clinic in which definite bony deposits on the vertebræ, intervertebral discs and lateral ligaments, were demonstratable by the x-ray.

He calls attention to the close parallelism which exists between this condition and spondylitis deformans, and thinks it argues strongly for the infectious origin of the latter. He thinks typhoid spondylitis would be a better name than typhoid spine.

O. M. G.

#### SUPPURATING KIDNEY OF PREGNANCY.

Barth (*Deutsche Zeitschr. fur Chirurgie*, Band 85), reports three cases of suppurating kidney during pregnancy.

1. Twenty-four years of age, six months pregnant, high temperature, pain in region of right kidney for the last four weeks. Cystoscopic examination revealed the bladder normal, urine acid, albumen, pus cells, small rod-shaped bacteria, nephrotomy July 24, 1901, pelvis of right kidney contained several spoonsful of pus, clouded urine, kidney parenchyma normal; tamponade, prompt disappearance of pain, temperature returned to normal, dismissed at end of three weeks with urinary fistula, which healed spontaneously after delivery, at term.

October, 1902, similar attack at fifth month of pregnancy; nephrotomy incision through old scar, pus clouded urine in renal pelvis; again dismissed with fistula that healed after delivery at term. October, 1903, third similar attack; induced abortion, since then has aborted spontaneously several times; October, 1905, urine normal.

2. Age 28 years, six months pregnant, double pyelonyhritis induced abortion, relief; one year later again pregnant, similar attack, urine from each kidney contained cocci and colon bacilli, nephrotomy, 100 c.c. of pus in pelvis of right kidney, prompt recovery.

3. Age 30 years, third pregnancy, fifth month pregnant, pyemia, tenderness in right lumbar region, fever, symptoms of endocarditis, ureteral catheterization, urine

from right kidney thick purulent, colon bacillus in pure culture; premature labor, fall of temperature, disappearance of endocarditic symptoms, urine gradually cleared, recovery in four weeks. Opitz has collected from the literature sixty-nine similar cases, usually the right kidney is involved, unquestionably hindrance to the flow of urine in the ureter with the presence of cocci is responsible for these attacks—right kidney most frequently involved owing to anatomic relations of right ureter, and Barth and Opitz believe that the swelling of the ureters during pregnancy (general pelvic hyperemia) may cause sufficient obstruction to the flow of urine (especially the right) to set up trouble to the renal pelvis, and the prompt cessation of suppuration after emptying the uterus and especially the healing of the urinary fistula lend support to this view. Almost without exception the colon bacillus was the offending organism. The colon bacillus is normally present on the mucous membrane of the urinary tract, but without contributory conditions—obstructions—does not cause clinical infection.

*Treatment.*—Induced abortion, premature labor, nephrotomy. (Referat in *Weiner Klin. Wochenschr.*, No. 11, 1907.) BAIRD.

#### SURGERY.

EDITED BY

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#### FRACTURES OF THE FEMORAL NECK— ANATOMIC TREATMENT.

Ruth applies the name "anatomic method" to the treatment outlined thirty-five years ago by Prof. T. J. Maxwell, and urges the application of this method in every case of fracture of the femoral neck. The essentials of treatment are as follows:

1. Reduction of the fracture by flexing

the thigh at right angles to the trunk to bring the line of action of the psoas and iliacus above and away from contact with the anterior surface of the capsule, so that the muscular action cannot force soft parts between the fragments or disturb alignment.

2. Outward pull upon the upper end of the lower fragment by an assistant to bring the trochanter major as prominently on the injured side as on the sound side, while traction is made on the limb in the long axis of the body until all displacement and deformity, as indicated in the length of the limbs, position and prominence of the trochanter majors, are overcome.

3. Adjustment of a steady lateral pull on the upper end of the lower fragment, and by Buck's extension and counter extension to the limb in line with the body to maintain normal length of the limbs.

4. The adjustment of the traction by weight and pulleys to the extremity in line with the body and the lateral pull so that there shall be no tendency to shortening, eversion of the foot, flattening of the hip, or dropping of the great trochanter on the injured side behind and internal to its normal level with the opposite side because of weight or muscular action. The foot of the bed must be raised enough to overcome by the body weight the tendency to slide toward the foot of the bed; the side of the bed corresponding to the injury must also be elevated to overcome by body weight the tendency to be drawn toward the lateral point of traction. The lateral traction must be made sufficiently forward as well as outward to raise the upper end of the lower fragment to a position corresponding with that of the opposite trochanter, and to overcome all tendency to eversion of the foot by the extra external rotating force of the limb's weight and the altered



rotating action of the psoas and iliacus.

There is not the slightest need for differentiation of the various forms of fracture of the femoral neck, as all varieties are reduced and maintained in the best possible position by the same means.

Some fifty-two cases are reported by the author and the following conclusions are deduced:

1. Cases between eighty and eighty-eight, 12.

2. Union with ability to walk well, 8.

3. Non-union (treated only four or five days), 2.

4. Paralysis preventing walking, 2.

5. Under eighty fracture to secure union, none.

6. No failure to secure serviceable limbs in any case under seventy years so far reported, excluding cases in which treatment was abandoned inside of three weeks, death from intercurrent malady, or in which the injury is too recent to report. This gives serviceable limbs in 100 per cent. in cases under eighty years of age.

7. Percentage of success in patients over eighty years of age, 66 2-3.

8. The mortality from this method is as low as, if not lower than, that by any other plan of treatment.

9. Usually there is entire freedom from pain, never any severe pain.

10. There is perfect immobilization of the fragments.

11. It is easy of application, with almost no expense for the dressing.

12. It can be applied by any one with the most rudimentary mechanical ability.

13. The method admits of change of position for rest, cleanliness, dressing, massage, and to relieve the tendency to hypostatic congestion.

14. Every part of the body is accessi-

ble as often as may be needed for any attention whatever.

15. The bedpan and urinal can be used with ease.

16. The sitting posture is attainable at any time and can be used as long as desired or indicated.

17. To this should be added absolute certainty of union if the patient lives and is treated four weeks.

18. It gives the greatest proportion of recoveries with the minimum of deformity or impairment of function.

19. It is applicable to every age or physical condition.—*Therapeutic Gazette*, March, 1907.

#### NERVOUS AND MENTAL DISEASES.

EDITED BY

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In a previous number of *Colorado Medicine* I remarked upon the significant and modifying influence in prognosis of insanity, of merged clinical symptoms belonging to different nosological types. Aug. Hoch (*Jourl. Nerv. and Ment. Dis.*, April, 1907, page 264) refers to the same fact in discussing prognosis of manic-depressive insanity. In reference to the depressions, he points out that the symptoms of the entire depressive complex are retardation, sadness and the anxiety-unreality complex. In typical manic-depressive states there is only sadness and retardation. Here the outlook is good. In typical involutional melancholias there is from the beginning uneasiness, anxiety to which is often added later the anxiety-unreality complex. Such patients advance to a state of deterioration, characterized by a narrowing of the mental horizon. It is possible, however, to reach the anxiety-unreality complex by way of manic-depressive states.

Regarding manias as is well known the clean cut cases of considerable intensity present the best prognosis, the hypomanic cases having a less favorable outlook for complete recovery. Also, cases in which the disorder of behavior is out of proportion to the flight of ideas and intellectual disorder in general are prognostically more favorable.\* Attacks are apt to be long or frequent. Prognosis in cases where the delusional element is strikingly disproportionate to the flight of ideas are more doubtful than those of simple, classical mania. In short, a certain harmony intensity of symptoms is prognostically more favorable than strong discrepancies in the component elements of a clinical picture.

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\*This statement is probably a typographical error because it is at variance with Hoch's final conclusion and also with what we know of the sinister significance of dominating disorder of behavior in some types of dementia praecox.—Dept. Ed.

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J. M. Bennion (*The Lancet*, January 5, 1907) summarizes his investigations as to the use of strontium bromide for epilepsy in the insane as follows:

(1) This salt as a rule acts better in controlling the number and severity of the fits than the mixed bromides of sodium and potassium. (2) Strontium bromide rarely causes depression. (3) Rashes were absent in all his cases. (4) It acted best and most consistently on the female patients, being far superior in these cases to the mixed bromides. (5) Maniacal symptoms of male patients were not influenced to any perceptible degree. (6) The mental condition of female patients appeared to improve. (7) The severity of the hospital type of epilepsy experimented upon affords reasonable grounds to anticipate even greater benefit in milder forms. (8) He thinks that, after a fair trial, clinicians will give

strontium bromide preference over other bromide salts.

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#### UNUSUAL PUPILLARY PHENOMENA IN HYSTERIA.

Jas. J. Putnam (*Boston Med. and Surg. Jourl.*, April 4, 1907) recently demonstrated an hysterical patient at a staff meeting of the Massachusetts General Hospital who displayed complete immobility of the pupil of one eye associated with spasm of the ciliary muscle of the other eye, the pupil of which was rather small habitually, but which responded to light and with convergence. Fundi normal but vision of the eye with the spastic ciliary muscle was considerably reduced both as to acuity and size of field. The patient, a girl of nineteen and a mill operative, had been subject since infancy to occasional attacks which seemed of an epileptic character. Examination showed the patient was anesthetic over the entire half of the body on the side of the spastic ciliary muscle, the eye ball and nasal mucous membrane being included. Other marks of hysteria were present. Suggestion in mild hypnosis failed to remove the anesthesia or to modify the eye symptoms, but vision improved through training. The case demonstrates how deeply hysteria may effect reflexes beyond the reach of the will.

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#### OPHTHALMOLOGY.

EDITED BY  
E. W. Stevens, M. D.,  
Denver, Colorado.

#### THE OPHTHALMOSCOPIC EVIDENCE OF ARTERIOSCLEROSIS.

(1) George Coats, Intraocular Vascular Disease, (*The Ophthalmoscope*, November 1, 1906), (2) G. E. DeSchweinitz, Concerning the Signs in the Retina of Persistent High Arterial Tension and Their Diagnostic and Prognostic Import, (*Transactions Am. Oph. Soc.*, 1906).

(1). Coats points out the importance of regarding intraocular vascular disease from a larger view point than that of the pure ophthalmic specialist. In the eye, vascular changes are displayed with a minuteness nowhere else obtainable in the living body. In most instances our first thought on finding retinal vascular disease is not what is the prognosis with regard to sight, but how far is the disease to be regarded as an indicator of the condition of the other vessels in the body, and how far, therefore, does it affect the prognosis with regard to the life of the patient. The method of examination is indefinitely more delicate than palpation of the radial or temporal arteries through the skin. By means of it we are often led to an unfavorable view of the condition of the cerebral vessels, or to a diagnosis of grave constitutional disorder such as nephritis or diabetes. Gunn reported fourteen cases of intraocular vascular disease in which cerebral hemorrhage subsequently occurred. Yet when this has been admitted, there are limitations to be set and reservations to be made. Nothing emerges more clearly from pathological research than the fact that angiosclerotic processes are almost always exceedingly irregular in their distribution. It is easy to prove that some patients show extensive intraocular angiosclerosis without the least palpable rigidity of their radial or temporal arteries, and the reverse is also true. Moreover, the radial or temporal arteries are admitted to be but imperfect indicators of the state of the cerebral vessels. These considerations show that one region may be affected while other areas are normal. But, in addition, within the same area, vessels of different sizes may be differently affected. Syphilis, for instance, being a morbid process which falls especially on the smaller arterioles. Not only so, but in the examination of serial sections from small vessels one frequently

finds the most notable differences within a very short space. The central retinal artery may be much diseased and the retinal vessels almost free, and *vice versa*. With the ophthalmoscope the same frequent irregularity of distribution of vascular disease is well known. It is evident, therefore, that disease of the retinal vessels is not positive proof of disease in an other vascular areas although it furnishes a presumption in favor of its existence; a presumption which will be strengthened if any general cause of angiosclerosis can be found, such as syphilis, diabetes or nephritis. On the other hand the absence of retinal changes is no positive proof that other vascular areas are intact. These facts detract in some degree from the value of the ophthalmoscopic evidence of general disease, yet it remains the best indicator of the state of the vessels generally which we possess. Positive evidence is of more value than negative. When retinal vascular disease is present the prognosis is always grave; when absent it is not necessarily good. In all cases the evidence furnished by rigidity of the peripheral vessels, by high arterial tension, by hypertrophy of the heart, and by accentuation of the cardiac sounds must have due weight.

After considering the normal microscopical anatomy of the retinal vessels, Coats enters into the histological details of angiosclerosis, a subject which does not lend itself to abstraction.

(2) DeSchweinitz divides the eye-ground lesions of persistent high arterial tension, when this is a symptom of arteriosclerosis, into those which are suggestive and those which are pathognomonic. The suggestive signs include uneven caliber and undue tortuosity of the retinal arteries, increased distinctness of the central light streak, an unusual light color of the breadth of the artery and



alterations in the course and caliber of the veins.

The pathognomonic signs include changes in the size and breadth of the retinal arteries, of such character that a beaded appearance is produced, distinct loss of translucency; decided lesions in the arterial walls, consisting of white stripes in the form of perivascutitis; alternate contractions and dilatations of the veins, and particularly, and this is the most important of the signs, indentation of the veins by the stiffened arteries in the same manner as a solid rod would indent a rubber tube when lying across it. Sometimes the vein is simply flattened slightly at the point of crossing, or merely pushed aside, or its caliber is contracted so that beyond the point of crossing there is an ampulliform dilatation. In addition there may be changes in the venous walls, so that they are bordered with white stripes, and the veins may be exceedingly tortuous and contain varicosities. Finally, there are œdema of the retina and hemorrhages.

The above ophthalmoscopic signs are produced by no other condition except the persisting high arterial tension of arteriosclerosis, and, therefore, eye-ground examination is of paramount importance in the early recognition of vascular disease. If the findings are positive they are diagnostic.

The prognosis as regards the eye and its functions will depend upon the size and situation of retinal hemorrhages. These hemorrhages may invade the vitreous and result in proliferating retinitis, glaucoma, or detachment of the retina. The central artery of the retina may undergo degeneration and create disturbance in the nutrition of the axial fibers of the optic nerve and the symptoms of retro-ocular nearitis, or the ciliary arteries may be similarly affected and,

therefore, the nutrition of the lens suffer, producing cataract.

As to the general prognosis, a large number of cases suffer from cerebral apoplexy within comparatively short periods after the discovery of retinal vessel changes. But these retinal vessel changes are also important from a diagnostic standpoint, as they may be part of the symptomatology of arteriosclerosis, which may be associated with or eventuate in renal sclerosis. Furthermore, these retinal vessel changes may be evident where the usual renal retinitis may not supervene, because they are significant of a process which may terminate fatally before the development of a fully established nephritis.

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#### EAR, NOSE AND THROAT.

EDITED BY

**Wm. C. Bane, M. D.,**

Professor of Otology, Denver and Gross College of Medicine.

**C. E. Cooper, M. D.,**

Denver, Colorado.

#### INTRANASAL CONDITIONS AS BEARING UPON THE ETIOLOGY OF DISEASES OF THE EAR.

G. Hudson-Makuen, (*Penna. State Med. Journ.*, February, 1907), refers to the classic monograph on nasopharyngeal obstruction in relation to diseases of the ear, by Wilhelm Meyer, issued two decades ago. It demonstrated the folly of attempting to cure the great majority of ear and laryngeal diseases without attention to the nose and pharynx. "In the light of recent experience and in these days of preventive medicine, it is to the rhinopharyngologist that we look for the best results, for if we can keep the nasopharynx in good condition and the nasal accessory cavities well drained and ventilated, we shall eliminate not only the majority of aural and laryngeal diseases,

but also many of the ophthalmic diseases as well."

That diseases of the ear, especially in their initial stages, are largely dependent upon intranasal conditions, is a fact well known to otologists, but is not, as a rule, recognized by the general practitioner. The anatomic and physiologic relationship of the ear and nasopharynx are emphasized, in that the tympanum occupies the same relation to the nasal cavity as do the sphenoid, ethmoid, maxillary and frontal sinuses. The mucous membrane lining all these cavities is continuous. The drainage of the ear, and the æration is by way of the nasopharynx. During inspiration the drumhead is drawn inward, and in expiration it is moved outward.

Ear diseases caused from nasal conditions are, first, from obstructive nasal respiration, as by hypertrophies, intranasal growths; septal deflections, spurs, and nasopharyngeal hypertrophies; second, catarrhal and purulent conditions of the nose and accessory cavities; third, from reflex irritation.

Emphasis is placed upon the damage to the middle ear from lack of proper æration through the nasal passages. Reflex disturbances in the ears, vertigo and pain, have been fully demonstrated to be caused by intranasal pressure from hypertrophies, deflections, and spurs, in that relief followed removal of the abnormalities.

The importance of looking beyond, as well as in the ear, for the cause of the ear disease, and, that the treatment should include not only the ear, but the nasal and accessory cavities, is clearly set forth by the author.

Dr. Makuen, in closing states: "As to the prognosis in aural disease due to intranasal conditions, I should say that we can generally promise relief, and even a cure, by treatment directed to the nose,

if we can see the patient at the very beginning of the trouble."

He was personally affected by a sensation of fulness in the ear, with marked intermittent vertigo, due to intranasal pressure by a spur. All the symptoms were immediately relieved by an operation, and have not returned in the interval of fifteen ears.

BANE.

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#### A STUDY OF THE ETIOLOGY OF INFLAMMATORY DISEASES OF THE NOSE AND ACCESSORY SINUSES.

William L. Ballengar states that there are three stages of acute inflammation, namely (1) increased hyperemia, (2) increased nutrition (increased resistance), (3) increased leucocytosis. The inflammation is excited by the presence of certain noxa, usually pathogenic micro-organisms or toxins, though it may be chemical or traumatic in character, and in the latter case it primarily consists of dead or broken-down cells which act as foreign bodies and are thrown off by the inflammatory reaction in the living tissues. Usually pathogenic bacteria sooner or later invade an inflammation of chemical or traumatic origin and then become of chief importance.

Therefore, inflammation is an increased physiological activity directed toward the elimination of these irritants. The increased hyperemia adds additional nutrition, facilitates leucocytosis and flushes the infected area, thus diluting the irritation.

The increased nutrition which is incident to the hyperemia, is necessary to the cells, because of the antagonism of the irritant. More tersely it is expressed as increased resistance. Increased leucocytosis needs no further comment.

The character of the reaction may be adequate, inadequate or excessive. Most frequently it is inadequate. There-

fore, reason would dictate therapeutic measures intended to increase it, rather than those that would hinder or delay its progress.

A prominent and distinguishing characteristic of a mucous membrane is the presence of mucous cells which may or may not be cast off in the discharge. Those deeply situated are more liable to be stimulated by the irritant and hyperemia to secrete a large amount of mucin; in fact, to such an extent that moderate grades of inflammation are accompanied by a copious discharge.

When this discharge contains many mucous cells and few leucocytes, we designate it catarrhal; when many leucocytes are present the character changes and we speak of it as mucopurulent; and, again, when composed of leucocytes almost entirely and a true destruction of the mucous membrane occurs, conditions are favorable to the deposit of fibrin and we are confronted with a membranous inflammation. Furthermore, should the destruction be carried beyond the mucous membrane and pyogenic bacteria be present, there would be a breaking down of the fibrin and invasion of surrounding tissues, resulting in a phlegmonous inflammation.

Chronic inflammation has the same reactions only in a less violent degree and in addition a proliferation of the connective tissue cells. Usually some obstructive lesion is present.

Speaking of the etiology of inflammatory conditions, the causes can be classified as exciting and predisposing. The exciting are chemical, traumatic and bacterial, which latter, is inoperable except when the resistance of the tissue is below par.

Predisposing are many and may be condensed into the statement: "When drainage and æration of a mucous membrane-lined cavity is impaired or blocked

the conditions are favorable for the growth of pathogenic bacteria." Therefore, any obstruction blocking the drainage or æration of the sinuses should be removed by medicinal, hygienic or surgical means. Predisposing factors may be further subdivided into (a) extranasal, and (b) intranasal.

The extranasal are:

*Age.*—Inflammatory conditions are more common among children and young adults due to the lack of care of one's health at these ages and the lessened resistance to the irritation, as compared with that which exists at maturity.

*Sex.*—Males are more commonly affected than females.

*Climate.*—Climates of much wet, cold and sudden changes in temperature more easily shock the vaso motor system, leading to a lowered resistance of the mucous membrane with consequent susceptibility to infection.

*Exposure.*—This also weakens the resistance, especially getting the feet wet or the exposure of a portion only of the body.

*Clothing.*—When heavier than is needed, permits the skin to become too sensitive. When too little is worn, the body is under a constant stress. The question of clothing is a study of the individual and should be determined by the individual resistance.

*Digestive tract.*—This is a fruitful source of lowered resistance, not only of the respiratory tract, but of the whole organism.

*Constitutional diseases.*—Such conditions as syphilis, diabetes and all associated with a faulty metabolism, predisposes to infection.

*Heredity.*—In so far as it bears upon anatomical peculiarities of the nasal passages, directly bears upon inflammation.

*Adenoids.*—When interfering with the



æration and drainage or when inflamed predispose to inflammatory processes.

Intranasal predisposing causes:

1. Obstructions in the lower portions of the nose, do not interfere with the æration of the sinuses because the air currents are principally above the inferior turbinate, nor do they interfere greatly with drainage, although the crests of ridges—the most common obstruction—may cause pressure and at least come in contact with the inferior turbinate at one or more points. Secretion frequently dries upon them in the form of crusts. They do, however, in a measure, predispose to inflammations. To them is frequently due turgescence of the mucous membrane resulting in hypertrophy.

When, however, a deflected septum produces an inferior obstruction, there is usually associated a superior one, then drainage of the sinuses is interfered with, the secretions are retained and undergo decomposition, irritate the mucous membrane and an irritation is produced associated with connective tissue proliferation and hyperplasia. The pathologic condition may extend to the inferior regions and cause similar results, though obstructions limited to the lower portions usually produce hypertrophic changes.

Obstructions of anterior portions of the nose. These are spurs and deflections of the septum. They do not affect drainage except by lessening the mechanical impact of inspired air in the region of the hiatus and ostia of the posterior ethmoidal cells. This impact when normal aids in the drainage of the sinuses emptying their contents in this locality and when lessened, the secretion does not flow so readily, may decompose and establish a predisposition to infection and inflammation.

Anterior obstructions, however, cause a paradoxical condition in this way. The air behind the obstruction becomes rare-

fied, which, according to Biers' theory, promotes the reaction of inflammation and thus tends to prevent serious inflammatory changes. Thus this class of obstructions predispose to inflammation and at the same time tend to cure. The author notes clinically the slight inflammations associated with anterior obstructions.

Obstruction of the middle turbinal region. Obstructions here are most productive of serious results than anywhere else. Calling to mind the location of the points of drainage of the sinuses it is readily seen how easily a deflected or thickened septum, or a large bulla ethmoidalis, or in fact any obstruction could interfere with both drainage and æration.

The results of high obstructions. Secretions are retained, decompose and biochemical products liberated which produce irritation and consequent inflammation. There follows upon such a condition a proliferation of the connective tissue cells and a hyperplastic rhinitis results, involving chiefly the middle turbinate.

According to the author, atrophic rhinitis is often a suppurative sinusitis with atrophy.

Several factors, therefore, enter into nasal inflammations; the exciting, usually pathogenic micro-organisms, the predisposing, many both intra and extranasal conditions, the former being chiefly composed of obstructive lesions. They should be studied from the standpoint of their interference with drainage or æration of the accessory cavities and obvious appropriate treatment instituted.—*Laryngoscope*, March, 1907. C. E. C.

Sodium salicylate should never be given in substance nor without thorough dilution if gastric disturbance is to be avoided. The effect of solution upon the skin should indicate the reason of its disturbing action in the stomach.

## Constituent Societies

A regular meeting of the **Medical Society of the City and County of Denver** was held at the Academy of Medicine building, April 2, 1907, at 8:15 p. m., President Bane in the chair.

In the absence of the Recording Secretary, Dr. Carmody acted as secretary pro tem.

The Board of Censors reported favorably upon the applications of Drs. F. R. Coffman, Alfred C. Godfrey and S. Frostdick Jones, who, upon ballot, were elected to membership.

The following applications for membership were read and referred to the Board of Censors: Clara M. Gouley, M. D., Denver and Gross Medical College, Class of 1906, address, Physician's building, proposed by Drs. Mary Hawes and Kate E. G. Yont; Charles C. Fowler, M. D., 424 Empire building, College of P. and S., Keokuk, Ia., 1894, proposed by Drs. W. A. Sedgwick and T. E. Carmody.

### Scientific Program.

Dr. W. H. Sharpley read a paper on **The Present Small-pox Epidemic**. Dr. Sharpley said that many cases came to Denver from the higher altitudes on account of the early pneumonic symptoms; many cases were encountered in which the patient attempted to deceive the physician by claiming they only had a blood disease; a great many cases were discovered when nearly well.

In the discussion of Dr. Sharpley's paper, Dr. Bates asked what was done with infected persons coming in street cars and trains. Dr. Levy thought the Health Office could notify the physicians of the presence of an epidemic. Dr. Sharpley thought it would be bad for Denver if such matters were given publicity. Dr. Steeves asked how long after convalescence the disease was transmissible. Dr. Sharpley said the disease was contagious in all stages, even before the eruption appears, and cited an instance where eleven people were infected from one case before erupting; the length of time the patient was contagious after convalescence depends upon the severity of the case. Dr. Edson, in support of Dr. Levy's contention, said a physician might not have any cases himself, though there were many in the city, and thought they should be published once a week, as in Boston. Dr. Sharpley thought it better if he reported to the society at each meeting. Dr. Blaine said he had seen a case with only three pustules. Drs. Sedg-

wick, E. J. Rothwell, Denison, Beggs, Oettinger and Boice also discussed the paper.

Bringing up the matter of the resolutions recently adopted in regard to **insurance examinations**, Dr. Beggs moved that the secretary be instructed to send copies of the resolutions to all the physicians in the city, to all insurance companies, and to the secretaries of the fraternal insurance organizations, and that these resolutions should become active July 1, 1907. Seconded by Dr. Rothwell. Dr. Blaine thought it better to let the fraternal orders alone. The motion carried.

On motion, the society adjourned. Members present, 43.

T. E. CARMODY,  
Secretary pro tem.

A regular meeting of the **Medical Society of the City and County of Denver** was held at the Academy of Medicine building, Tuesday, April 16, 1907. The meeting was called to order by President Bane at 8:20 p. m. The minutes of the two previous meetings were read and approved. The Board of Censors reported favorably on the application of Dr. Clara M. Gouley, who, upon ballot, was elected to membership.

### Exhibition of Patients.

Dr. W. W. Grant exhibited a boy of 12 years with cleft palate and hair lip. The boy was shown after the first operation, which was performed on the superior maxillary bone and the lip, the palate is to be operated upon later. It was necessary in this case to fracture the right superior maxilla in order to bring it down into place. The case is of interest because of the fact that the condition was left unremedied for so long a time, twelve years.

### Scientific Program.

On the **Interpretation of X-Ray Pictures as an Aid to Early Diagnosis of Aortic Aneurism**, Drs. Henry Sewall and S. B. Childs.

Dr. Sewall said that Aortic Aneurism was a frequent condition, that it was often not recognized until it was well advanced and unmanageable, that it was preventable, curable, and that the chances of cure diminished with the advance of the tumor. Increased intrathoracic pressure with dyspnea and cough were among the earliest stages of the condition, and physicians should be more on their guard for early symptoms. Every case of thoracic trouble of doubtful nature should be put under the X-ray. Of much more value than the Skiagram itself was the interpreta-

tion of the picture, the greatest difficulty being encountered in interpreting shadows of depth. For instance, he cited a case in which the skiagram showed what was apparently a mediastinal tumor and the post mortem showed an aneurism. Other cases were cited in which the X-ray showed beginning aneurism and proper treatment being instituted, recovery ensued. In interpreting a bulging shadow, one must eliminate tortuosity of the aorta which is often normal; an elongated arch must also be considered before aneurism is positively diagnosed. Other sources of error are the bronchial shadow and the shadow of the pulmonary vessels; likewise, mediastinal glands, especially in tubercular individuals, might prove a source of error, also the shadow thrown by a thickened pleura. Of use in overcoming the various sources of error, Dr. Sewall mentioned placing the sensitive plate both anteriorly and posteriorly, and also taking the ray picture at different angles.

Dr. Childs exhibited skiagrams, showing the normal and pathological, and pointed out the various points to be borne in mind in interpretation of the shadows.

In discussion, Dr. Stover said that pulsation is not pathognomonic of aneurism; he believed that the right and left posterior oblique, and the right and left anterior oblique position was a great aid in taking a proper skiagram. Dr. Levy said that the congestion of the bronchial vessels, showing the bronchial tree, might be of great aid in locating foreign bodies in the bronchi.

#### **Exhibition of Specimens with Case Reports,**

Dr. W. W. Grant exhibited pus-tubes removed recently from a woman in whom eighteen years ago he had diagnosed pelvic cellulitis with peritonitis, the condition following gonorrhoea. Dr. Grant also exhibited a uterus showing subperitoneal, intramural and submucous uterine myomata, which he had removed from a woman who had had an operation for a gangrenous, perforated appendix and recovered; this was followed in a few years by a pelvic abscess, from which she recovered after operation. The hysterectomy was very difficult, owing to the extensive adhesions, and took two and one-half hours; there was practically no shock, and no chill or sepsis following the operation, but a small amount of fever. He also exhibited a skiagram taken by Dr. Stover, showing a fracture of the scaphoid bone.

#### **A Sleeping Canopy to Give Invalids Outdoor**

**Life at Night, with Exhibition of Model,** by Dr. Charles Denison.

Dr. Denison spoke of the advantages to be gained by sleeping out of doors, and showed the model of a bed canopy which would accomplish the same result indoors. The canopy was easy of construction, practicable and not expensive.

Dr. S. D. Van Meter reported a case of **mistaken diagnosis**. The patient presented all the classical symptoms of stone in the bladder, except the stone-click with the stone searcher. Examination per rectum revealed a hard stony tumor separate from the prostate. There was a history of having passed a renal stone from the right kidney five years ago. A skiagram was taken and showed a distinct stone shadow in the bladder. The operation showed no stone, but instead, a hard, dense cartilaginous tumor projecting from the posterior wall.

Dr. W. H. Sharpley reported the contagious diseases encountered during the past ten days.

Dr. Stover showed skiagrams of an infiltrated ankle joint and a pin in the descending colon.

The Committee on Constitution and By-laws reported amendments to be considered at the next meeting.

Dr. Stover reported for the Committee on Incorporation that the necessary papers had been drawn up and were ready to file with the secretary of state.

Dr. Stover suggested that, owing to the dissatisfaction of the profession with the present companies occupied in **Medical Defense**, the medical profession organize their own medical defense. Dr. Sewall moved that the question be made a subject for discussion at the next meeting. Amended that the chair appoint a committee of five to report to the society on the subject at the next meeting. Carried. The chair appointed Drs. Stover, Simon, I. B. Perkins, Shere and Davis.

A communication from the Denver Convention League was read, and on motion of Dr. Beggs the discussion was postponed for the next meeting, notice of the same to be printed on the program.

On motion, society adjourned. Members present, 56.

ALBERT SILVERSTEIN,  
Secretary.

The **Eastern Colorado Medical Association** held its regular quarterly meeting in the Burlington hotel parlors, at Akron, Colo., on the evening of April 9, 1907. Eight members were



present, besides three visitors from Denver, including Dr. C. E. Cooper and Mr. Robert P. Carson, the associate chaplain. Members from Fort Morgan and Brush were conspicuous by their absence.

The meeting was called to order by President E. D. McGill, with the regular order of business, as follows:

Dr. R. L. Obrien, of Akron; Dr. M. D. Brown, of Wray, and Dr. G. M. Thom, of Deuel, were elected to membership.

Dr. C. E. Cooper, of Denver, was elected as an honorary member.

Election of officers for the ensuing year was taken up and the following physicians were elected: President, E. E. Evans, Fort Morgan; Vice President, J. M. Kaylor, Akron; Secretary, R. L. Obrien, Akron; Treasurer, E. W. Elliott, Fort Morgan; Board of Censors: M. D. Brown, Wray; George B. Bilsborrow, Yuma; W. E. Turner, Brush; N. J. Phelan is retained as Delegate. R. L. Obrien was named as alternate to State Society.

W. E. Turner is the representative to read a paper at the State Society meeting at Glenwood Springs.

The evening was concluded by a demonstration, on the cadaver, of the mastoid operation, by Dr. C. E. Cooper, of Denver, and three bedside clinics were shown by Drs. Kaylor and Obrien.

Dr. Cooper's demonstration excited considerable discussion as to the merits of the operation and other methods of treating middle ear disease, by the average country physician. Demonstrations were also given showing the usual operations for inflammation of the antrum of Highmore and frontal sinuses.

The Eastern Colorado Medical Association extends its thanks to Dr. Cooper for his kindness in attending the meeting and the pains-taking care and attention given to all requests by the members.

The next meeting will be held at Brush, Colo., on the evening of July 9, 1907.

GEORGE B. BILSBORROW, Secretary.

Trinidad, Colo., April 6, 1907.

The regular meeting of the **Las Animas County Medical Society** was held at the office of Dr. Jaffa, with President James G. Espey in the chair. The following members were present: Drs. Thompson, Dayton, Davenport, Dunkel, James G. Espey, Jaffa, Hinman and Freudenthal. Dr. Davenport reported a case

of a piece of steel in the **anterior chamber of eye**, removed by the use of a magnet. Dr. Dunkel reported a case of **erythema scarlatinoides**. Dr. James G. Espey, a case of **nephritis**, and Dr. Hinman a case of **gunshot wound of ankle**, followed by an eruption on body. Dr. Dunkel then presented the paper of the evening, entitled "**Medical Notes**," in which he treated of some of his experiences, more especially of influenza, in a highly interesting manner. The paper was freely discussed by all present. On motion, duly seconded, it was decided to give a banquet, and the president was instructed to appoint a committee of four, including himself, to arrange for same. The committee appointed was Drs. Davenport, Jaffa and Freudenthal.

The office of Dr. Dayton was selected for the next meeting and Dr. Hinman to present the paper.

ALFRED FREUDENTHAL,  
Secretary.

Fort Collins, Colo., April 3, 1907.

**Larimer County Medical Society** held its regular meeting in the City Hall. Those present were: Drs. Upson, Rew, Norton, Atkinson, Taylor, Bell and Stuver. Dr. Samuel Bell, formerly of Detroit, Mich., read a paper on the "**Opsonic Treatment of Disease**," in which he traced the history of Dr. Wright's discovery and outlined the literature on the subject during the last few years. The difficulties in establishing opsonin indices were indicated, and the necessity for training experts along this line pointed out. The highly favorable results already attained in the treatment of many diseases held out strong hopes as to the future benefits to be derived from this form of treatment. The paper was discussed and commended by all the physicians present. It was suggested by Dr. Stuver that either through the Larimer County Medical Society or otherwise, the physicians of Fort Collins should secure the services of a trained expert to do this kind of work for the profession of Fort Collins. By the proper kind of organization this work could be done in a satisfactory manner, and the physician doing it be adequately remunerated for his services.

The application of Dr. D. O. Norton for membership in the society was approved by the admissions committee, presented and on motion Dr. Norton was unanimously elected a member of the society.

No other business appearing, the society adjourned.

E. STUVER, Secretary.

La Junta, Colo., April 9, 1907.

The meeting of **Otero County Medical Society** called to order by President E. G. Edwards at 8 o'clock p. m.

Those present were: Drs. Kearns, Finney, Edwards, Hall, Donlon, Jessie Stubbs and Moore, of La Junta; Dr. Farthing, of Swink; Dr. J. Ed Ray, of Sugar City; Dr. J. E. Jefferey, of Ordway, and Dr. Holmes, a visitor.

Minutes of two previous meetings were read and approved.

Proposition from Colorado Telephone Company to furnish space for names, addresses, etc., of physicians in advertising list, was laid on the table.

A paper entitled "**Preparation of Patient,**" bed and room (in obstetrical work), read by Miss Helen Lux. Paper was very full and complete, and was object of much compliment, and led to very interesting discussion.

Use of Kelly pad not approved, on account of difficulty in keeping it clean.

"**Obstetrical Bag and Contents**" was subject of a very interesting paper by Dr. Charles Farthing. Paper brought out a good discussion.

Vote of thanks was given to the members from a distance for the effort put forth in coming so far.

Adjourned until next regular meeting time.

W. MILROY MOORE,  
Secretary-Treasurer.

The **Boulder County Medical Society** met in the Physicians' block, Thursday, April 4, at 8 p. m.

Those present were: Drs. Gilbert, Queal, Giffin, Russell, Jolley, Cattermole, Lindsay, Garwood, Campbell, Shiveley, Rodes, Baird, Reed and Wood.

In the absence of the president and vice president, Dr. Giffin was appointed to preside.

The minutes of the last meeting were read and approved.

The paper for the evening, on "**The Value of External Anti-partum Examinations,**" was read by Dr. W. W. Reed.

Dr. Reed believes that the value of such an examination is not sufficiently recognized. He thinks a complete and systematic examination by abdominal palpation and auscultation combined with the use of a pelvimeter, should be a matter of routine, and made not later than the eighth month of pregnancy. By this means, the position and presentation of the fetus, the situation of the placenta, a multiple pregnancy, and the like, can usually be

determined, and such information is certainly valuable. He thinks such an examination, conducted with as much system as an examination of the chest would be, will minimize the number of vaginal examinations necessary, and lessen to a great degree the danger of infection. Some obstetricians find it possible to conduct many labors with no internal examinations, depending entirely upon the information gained by abdominal inspection, palpation and auscultation. When this can be done, we shall have made a great advance in the science of obstetrics and decreased the ratio of both the infant and maternal mortality.

The use of the pelvimeter is often condemned as impractical and inaccurate. Dr. Reed thinks its actual value is misunderstood. The size of the pelvis can only be approximated, but the recognition of an abnormality in shape, often the cause of dystocia, is of undoubted value, and our success will be greater when the pelvimeter is given wider use.

In discussing the paper, Dr. Cattermole states that he has had difficulty in determining position before the onset of labor. He thinks the fetus often changes position in the last few days of pregnancy, which lessens the value of previous examinations. He reported two cases during the past year in which birth was delayed one month after time computed. The size of the child in one of the cases made craniotomy necessary.

Dr. Jolley spoke of the frequent lack of opportunity to make any external examination or take any measurements previous to the onset of labor. He reported a case of premature separation of placenta with child still born.

Dr. Garwood thinks such an examination as that described by Dr. Reed should be a matter of routine, and outlined the system he uses in his own practice. He thinks too many vaginal examinations are made, and considers it a question of criminal slovenliness.

A report of clinical cases was then called for. Dr. Rodes reported a case in which symptoms resembled **intestinal obstruction** during several attacks. A skiagraph finally showed stone in the left kidney.

Dr. Gilbert reported several cases seen recently in which symptoms were referred entirely to the abdomen and only close questioning elicited symptoms referred to the kidney or urinary findings disclosed condition and made the diagnosis clear.

Dr. Jolley reported a series of four cases of **carcinoma of intestine**.

Dr. Baird spoke of his experience with the

treatment of **renal colic**, and states that he has obtained good results from the use of Contrexeville water, recommended by Lauder Brunton.

The reconsideration of the resolution relating to fees for **insurance examinations** was then taken up by the society.

Dr. Giffin believes that the matter is a business proposition. If a man thinks he can afford to do the work for \$3.00, he should be allowed to do so, without interference from the county society. He thinks the pay is much better in proportion to the time spent than the usual chest examinations.

Dr. Cattermole believes it a personal matter, and thinks one should not attempt to set a scale of prices for others.

Dr. Gilbert thinks few men are so busy they cannot afford to do the work for \$3.00. He believes it a matter of policy to demand \$5.00, and thinks the companies seek \$5.00 men, but does not think the amount of the fee demanded should be made a question of membership.

Dr. Shiveley does not like the idea of coercion. He thinks it lowers the dignity of the profession by descending to the basis of trades unionism. He thinks a recommendation might be wise, but objects to the form used in the resolutions.

Dr. Queal thinks the \$3.00 fee well repays the physician for the time expended.

Dr. Jolley believes the resolutions are necessary to secure concerted action on the part of the medical profession as a whole.

Dr. Rhodes thinks the acceptance of the reduction in the fee is an admission on the part of the profession that some one else can set the fee for their work. Unless the society acts as a whole, their action will be of no avail.

Dr. Russell thinks we should make a united stand. We should stand by our fee-bill also.

Dr. Garwood has given up his position as examiner for companies paying \$3.00, and expects to stand by it. He thinks it a matter of business policy to demand the higher rate.

Dr. Campbell agrees with Dr. Gilbert, that the companies seek out \$5.00 men for their work. This is not a periodic wave, but the first time the matter has been discussed all over the country. He calls attention to the fact that two more counties in the state, El Paso and Montrose, have adopted resolutions demanding the \$5.00 rate. He thinks there should be no need of coercion, and believes that the standing of the profession is impaired by accepting the lower rate.

A vote was then called for on the motion to adopt the resolutions passed by the Colorado State Medical Society, and those of Dr. J. N. McCormack, of Kentucky, as made at the February meeting of the Society. The motion was lost.

A motion was made by Dr. Jolley to adopt resolutions recommending the demand for a \$5.00 fee, but not requiring it, or making the amount of the fee accepted in any sense a test of membership.

A motion was made by Dr. Rodes, and seconded by Dr. Reed, that the matter of resolutions regarding insurance be laid on the table. Carried.

The applications of Drs. J. A. Matlock and C. L. Terril were recommended by the Board of Censors, and Drs. Matlock and Terril were elected to membership.

The application of Dr. Willard J. White, recommended by Drs. Giffin and Cattermole, for membership, was read, reported on favorably by the Board of Censors, and Dr. White was elected to membership.

The society then adjourned, to meet the first Thursday in May. LUCY M. WOOD,  
Secretary.

The **Boulder County Medical Society** met in regular session in the Physicians' block, Thursday, May 2, at 8 p. m.

In the absence of the president, the meeting was called to order by the vice president, Dr. Spencer.

Those present were: Drs. Jolley, Campbell, Trovillion, Giffin, Baird, Reed, Spencer and Wood.

Dr. Trovillion read a very excellent paper on "**Small-pox**." He referred to the prevalence of the disease in this part of the state, between twenty and twenty-five cases having been reported in the last eighteen months. This frequency is accounted for by the number unprotected by vaccination and the mild form of the disease, leading to mistakes in diagnosis, which permit of the spread of the contagion.

Dr. Trovillion dwelt at some length on the differential diagnosis. In the absence of known cases of the disease in the vicinity, it is easy to mistake the disease in the period of invasion. In the stage of eruption fewer errors should be made. A mild case of small-pox and a severe case of chicken-pox should not be confused, but a mild case of small-pox and a mild case of chicken-pox may give rise to considerable question for a few days. He has never seen a case of small-pox in a person



having a good vaccination scar. That the virulence of the disease is steadily decreasing in this country, seems to admit of no doubt, due, he thinks, to vaccination. The disease seems to be due to a germ as yet not isolated.

Dr. Trovillion reported the case of a whole family, with one exception, contracting the disease, from wearing second-hand clothing, purchased in Cripple Creek, where an outbreak of the disease had occurred,

No treatment yet employed seems to have any influence in lessening the duration of the disease or preventing pitting and scarring.

Dr. Jolley reported having seen two cases of small-pox, thought to have followed the exhuming of a corpse, buried twenty-five years before. The history was not very clear, but the death was believed to have been due to an eruptive disease, possibly scarlet fever. At any rate, the two men employed in exhuming the corpse contracted undoubted small-pox, with no other known exposure to the disease.

In answering some questions regarding diagnosis, Dr. Trovillion referred to a case he had seen in which diagnosis of possible small-pox was made, based on the chills, fever and intense backache. The correct diagnosis, typhoid fever, was not possible until after death, on the third day, when post mortem was held.

#### Clinical Cases.

Dr. Giffin reported a case of **uremic convulsions**, in a primipara, aged 26, at seven and one-half months. The case was chiefly remarkable for the abrupt onset and equally abrupt termination of symptoms. There was a history of possibly scanty amount of urine, and slight oedema under eyes and affecting one ankle for about three days before an examination of urine showed albumin in considerable quantity. Treatment was instituted at once, but the urine remained scanty and headache became a prominent symptom the next day. The birth of a well developed fetus at seven and one-half months occurred that evening after very little pain.

Twelve hours after delivery occurred the first and only convulsion. In the twenty-four hours terminating about seventeen hours after delivery,  $5\frac{1}{2}$  ounces of urine was passed. In the next twenty-four hours, with the usual treatment continued, hot packs, free catharsis, and much liquid by mouth, the amount of urine increased to  $120\frac{1}{2}$  ounces, and the case has progressed favorably since.

Dr. Jolley reported further concerning a case of **premature detachment of the placenta**, reported at the last meeting. The patient was up on the tenth day, and developed phlebitis

in the left leg about the fourteenth day. One week later symptoms appeared in right leg.

The committee appointed to select representatives for the society on the program for the State Society, reported the selection of Dr. Queal for the State Society, and Dr. Spencer for one of the section programs.

The society then adjourned, to meet Thursday, June 6.

LUCY M. WOOD,  
Secretary.

## Other Societies

### Denver Academy of Medicine.

At the regular session of the Academy, held April 5, 1907, Dr. James C. Todd, of Denver, discussed **Some of the Newer Methods of Urinalysis**.

The subject was approached from the standpoint of the practitioner rather than from that of the laboratory man.

Among the points considered were the preservation of the urine, with mention of recent experiments, and Cammidge's reaction in acute pancreatitis. In connection with the latter, the phenylhydrazin test for sugar was briefly discussed. Kowarsky's improved technic, which was given in detail, making this sensitive and reliable test very convenient for routine and clinical work.

Acetonuria and diaceturia, which have recently attracted much attention because of their relative post-operative toxemia, were considered at some length. The newest tests for acetone and diacetic acid were shown.

Ehrlich's diazo reaction—upon which, despite its age, more has been written within the past five years than upon any other urinary test—was also discussed; the conclusion being that it has great practical value in the diagnosis of typhoid fever, the prognosis of phthisis, and in the differential diagnosis of measles. Emphasis was laid upon technic, with the claim that faulty technic and failure to record the stage of the disease in which the tests were made, have been responsible for most of the conflicting results which have been reported.

Russo's methylene reaction, which has lately been heralded as a desirable substitute for the diazo reaction, was shown to have no clinical value.

The discussion which followed indicated the interest caused by the doctor's instructive remarks upon the timely subject he so well treated.

## Correspondence

Vienna, April 21, 1907.

My Dear Doctor Moleen:

According to my promise, "I take my pen in hand" to write you a little letter about my travels.

This being primarily a trip for rest and recreation after nearly three decades of hard work, I have seen very little of hospitals and disease till reaching this city, abandoning myself to sight-seeing and travel. I can assure you it has been hard work to be enthusiastic about these sights at times, interesting though they were, and the fine and delightful aroma of the hospitals and the operating rooms of Vienna have been like the smoke of battle to an old war horse, and I am longing to get back to work, for after all nothing but work seems worth while to one who has acquired the habit, particularly if he has permitted himself to think that he is doing something for humanity in his own small way, as physicians and surgeons, more than most men may.

The charm and novelty of Funchal, Maderia, of Gibraltar, Genoa, Naples, Alexandria, and, last but not least, Cairo, were delightful beyond belief however, and the temples, tombs and monuments of the valley of the Nile made all the history of the Christian era seem like the doings of the day before yesterday with their records of from three to six thousand years.

Cairo, with its hords of grown up children, for that is about the status of the natives, is an ever changing picture full of life and color. Its Kaleidoscopic street scenes by day and night and **all night**, and its weird shouts and songs give it an endless interest; and its shops and bazars fill one with amazement at the skill and art of its craftsmen.

Many letters would fail to give you even a remote idea of all of this, and I shall not attempt to do so.

From Alexandria (after the trip up the Nile to Assouan, Luxor and Assint) we sailed for Sicily, and of all the indescribably charming spots this is the most so. Taormina is a walled and gated village perched in a notch on the side of the mountain. It has a ruin of an old Greek theater which aside from being most picturesque in itself permits a glimpse of the snow-capped peak of Etna and its hood of volcanic smoke and steam through the broken walls. The blue Mediterranean with its black rocks and silvery spray add color to the ensemble of chromatic and pictur-

esque effect which make Taormina the mecca for artists, and the haven of repose and rest for the weary. And so with all of the island of Sicily. It is by far the most delightful and charming spot I have ever found upon earth, grouping as it does, about the base of Etna the remains of the glory of the past with the beauties of today.

Of Naples, Rome, Florence and Venice I need say nothing except that I found in them those ancient and modern objects of interest so well known to the world and so much visited by my countrymen.

Venice is peculiarly delightful, and an educated and accomplished idler could float about her waterways for months in happy contentment, and I can conceive of even a certain limited degree of tolerance of idleness being generated in others in its seductive environment.

Here in Vienna, however, one is again with workers, and in the hospitals is reminded of Cy Warman's poem in which he says: "For it is day all day in the daytime and there is no night in Creede." Work never stops and the larger number of American physicians are busy in laboratory, operating room or lecture room from early in the morning till late at night.

As you already know, the facilities for the study of pathology, diagnosis and internal medicine are enormous because of the abundance of material, the freedom with which it is used and the unusual skill and ability of the workers. In the fields of practical surgery and gynecology great opportunities are presented for study and the bone and joint work in the clinic of Mosestig-Moorhof is alone worth a trip to Vienna.

Gersemy's paraffin work on the nose and face, and Wortheim's, Schanta's and Chrobak's gynecologic clinics are all of great interest and value, but over and above all else shines the pathology of Profs. Ghom and Steerk and the anatomy of Prof. Tandler. Here is the foundation of all sound, practical medicine and surgery and the basis of diagnosis, prognosis and treatment. Here the operator may become a surgeon and the practitioner a physician.

Great opportunities are presented for the study of such special branches as eye, ear, nose and throat, nervous diseases, etc., and many Americans are here for such work.

The men of the American colony have established a very helpful society for mutual benefit (The American Medical Association of Vienna) and through its help one soon gets to work and settled in comfortable quarters.

I shall soon be off for Paris and England. In England I hope to see the work of Mayo-Robson, Moynihan and Leeds, Wright and others and I am now expecting to meet many of my Denver colleagues on the Board Walk of the Atlantic City meeting of the A. M. A., and to be back in Denver soon after that.

HORACE G. WETHERILL.

### New Members

D. O. Norton, Fort Collins; Everard W. Fox, C. J. Hinm, Trinidad; R. C. Dunkel, Riley Canon; James McCarroll, Berwind; M. J. Taney, Aguilar; C. L. Terrill, Gold Hill; G. M. Thom, Brush; M. D. Brown, Wray; R. L. Obrien, Akron; Willard J. White, Longmont.

### Items

The American Gastro-Interological Association have issued the preliminary program of the tenth annual meeting, to be held at Atlantic City, N. J., June 3 and 4, 1907. From the subjects announced, the meeting should be of unusual interest.

The American Academy of Medicine (specializing in Medical Sociology) will hold the thirty-second annual meeting at the Hotel Dennis, Atlantic City, N. J., Saturday, June 1, and Monday, June 3, 1907. The provisional program is being circulated. In the annual address, the president, Dr. Casey A. Wood, of Chicago, will speak on "A Medical Career and the Intellectual Life."

The firm of Park Davis & Company, of Detroit, Mich., sustained the loss of their president, Mr. Theodore D. Buhl, who died April 7, 1907. A touching memoriam was adopted by the Board of Directors, on behalf of the stockholders, employes and executives.

The wife of Dr. L. V. Howard has brought suit against Dr. Frank M. McCartney, a young surgeon of Denver, for malpractice. Both doctors are members of the Denver City and County Society, and of the Denver and Gross Alumni Association.

In the malpractice suit against Drs. I. B. Perkins and F. E. Prewitt, Dr. Perkins was exonerated by the court, and the jury failed to agree in the suit against Dr. Prewitt.

The jury disagreed in the case of Dr. T. M. Hopkins. Eleven of the jurors believed the doctor should be acquitted.

Dr. J. N. Hall, of Denver, addressed the graduating class of the Cheyenne Ladies' Hospital Aid Association, St. John's Hospital, at Cheyenne, April 30, 1907.

### Books Received

[All books received will be acknowledged in this column to be recognized by the contributor as the equivalent. Reviews will be made of these volumes according to merit and the interests of our readers.]

**Physical Diagnosis, With Case Examples of Inductive Method.** By Howard S. Anders, A. M., M. D., Professor of Physical Diagnosis, Medico-Chirurgical College, Philadelphia; Physician to the Philadelphia General Hospital, Tuberculosis Department, Etc., Etc. With 88 illustrations in the text and 32 plates. Cloth, pp. 456. Price, \$3.00 net. New York and London: D. Appleton and Company, 1907.

**Modern Medicine. Its Theory and Practice.** In Original Contributions by American and Foreign Authors. Edited by William Osler, M. D., Regius Professor of Medicine in Oxford University, England; formerly Professor of Medicine in Johns Hopkins University, Baltimore; in the University of Pennsylvania, Philadelphia, and in McGill University, Montreal. Assisted by Thomas McCrea, M. D., Associate Professor of Medicine and Clinical Therapeutics in Johns Hopkins University, Baltimore. In seven octavo volumes of about 1,000 pages each; illustrated. Volume I, cloth, pp. 937. Price, \$6.00 net. Philadelphia and New York: Lea Brothers & Company, 1907-1908.

### Books Reviewed

**Organic and Functional Nervous Diseases.** By M. Allen Starr, M. D., Ph. D., LL.D., Professor of Neurology in the College of Physicians and Surgeons, New York. Second edition, thoroughly revised. Illustrated with 282 engravings and 26 full-page plates. Octavo. Cloth, pp. 816. Price \$6.00, net. Philadelphia and New York: Lea Brothers & Co., 1907.

Dr. Starr has given us a most excellent work. It is a thorough revision of the first edition, with exceptionally good chapters on the Functional Diseases added. The book opens with a concise but clear outline of the structure of the nervous system, abundantly illustrated by handsome microphotographs. Over 100 pages are devoted to injury and diseases of the peri-



pheral nerves. The chapters in which the spinal cord diseases are considered are commendable, especially that portion which treats of the spinal atrophies. We are glad to note that Chronic Anterior Poliomyelitis and Amyotrophic Lateral Sclerosis are not considered collectively.

We can hardly agree with the author that, for the reasons given, he is justified in omitting the diseases of the ductless glands—Acromegaly, Myxedema, Cretinism, Exophthalmic goitre; those secondary to infectious diseases—Tetanus and Hydrophobia; and, so-called trophic disorders—Lipomatosis, Megalocephaly, Scleroderma, Trophedema and Angioneurotic Edema, in a work on diseases of the nervous system which is otherwise so complete.

The work however, excels the first edition, which was so well received that we predict a rapid exhaustion of this edition.

The typographical work is a credit to the publishers, and the numerous splendid illustrations deserve specially to be mentioned.

Students, practitioners and specialists will find it a valuable, practical and up-to-date work.

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**Text-Book of Psychiatry.** A Psychological Study of Insanity for Practitioners and Students. By Dr. E. Mendel, A. O. Professor of the University of Berlin. Authorized Translation. Edited and Enlarged by William C. Krauss, M. D., Buffalo, N. Y. Octavo, cloth, pp. 311. \$2.00 net. Philadelphia: F. A. Davis Company, publishers, 1907.

This manual comes to us as the fruit of long experience on the part of the author as teacher of theory and practice of clinical psychiatry. Part I, devoted to the general psychiatry, contains terse descriptions of abnormal mental states from the psychologist's point of view. In addition, however, to symptoms so interpreted, pathological anatomy, etiology, course, diagnosis, prognosis and treatment of psychosis in general, is discussed. In Part II is described the various types of insanity as classified by the author. As regards great numbers of clinical varieties recognized, Mendel's classification is pre-Kraepelinian, as it were. That is, the dominant symptom is sufficient to designate the type of a class of psychoses. The method is serviceable to label many a case which would be difficult to classify where the author is intent upon segregation of clinical entities depending upon the triad, symptomatology, course and outcome as their support. With

the knowledge that any present day classification of insanity is faulty, we may yet term that of Mendel very practical, and his descriptions as comprehensive as the concise text permits. A useful guide for the examination of the mentally alienated and the New York law of relative to the commitment of alleged insane persons is appended.

B. O.

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**Grayson's Laryngology.** The Diseases of the Nose, Throat and Ear. By Charles P. Grayson, M. D., Clinical Professor of Laryngology, Medical Department, University of Pennsylvania. New (2d) edition, revised and enlarged. Octavo, about 550 pages, with 152 engravings and 15 plates in black and colors. Cloth, \$4, net. Philadelphia and New York: Lea Brothers & Company, 1906.

The author has successfully completed the task undertaken of simplifying the treatment by a careful selection of drugs, methods of application and surgical procedures best designed to meet the average case or condition. He has not, however, overlooked the extraordinary cases one occasionally meets, and gives the best of many therapeutical procedures, laying especial stress upon those most successful in his hands and avoiding the confusion of selection incident to a large numeration of, but partially effecting therapeutic practices.

A salient point is the clarity of the presentation, ideas succeeding each other in a logical sequence and pathological changes expressed and explicitly without that verbosity which is a great objection to the busy practitioner and a confusion to the student. The work throughout is terse, but not so condensed as to be useless.

It is quite evident that a point was strained to portray diseased conditions in such a manner that a careful reader would readily feel as if in the actual presence of the patient, and it would be needlessly said that the work is up-to-date including all of the latest procedures, operations, pathology, clinical experience, new instruments with the methods and indications for their use, which have emanated from the various portions of the medical world; while much that is obsolete is conspicuous by its absence.

The publishers should be complimented upon the excellent quality of the volume, the clearness of the print, the illustrations which are numerous and very meritorious, and colored plates generously distributed throughout the work.

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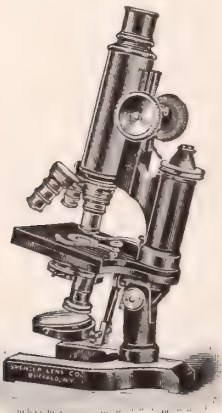
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# COLORADO MEDICINE

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All communications to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are *typewritten*.

Communications and items of interest are invited from all parts of the state. Death notices, removals, changes of address, etc., are especially desired.

Secretaries of the County Societies are earnestly requested to report their meetings, including the subject matter of the papers presented, and in general, the substance of the discussions.

Marked copies of local newspapers, or clippings, containing matters of interest to the profession will be gratefully acknowledged. The name of the sender should be given.

The journal will be issued on the 15th of each month. *All copy* must reach the editor not later than the first of the month. Advertisements of proprietary medicines will be accepted provided the preparations advertised have been approved by the Council of Pharmacy and Chemistry of the American Medical Association. Address all communications regarding advertising to

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## IMPORTANT NOTICE.

All members of the Colorado State Medical Society are entitled to a copy of this journal each month. Failure to receive the same, and change of address, should be promptly communicated to the editor.

VOL. IV.

DENVER, JUNE, 1907

No. 6

## Editorial Comment

### MEDICAL IDEALS AND MEDICAL TENDENCIES.

In an address delivered at the opening of the College of Physicians and Surgeons, under the above title, Dr. L. Emmet Holt (*Columbia University Quarterly*, March, 1907), gave utterance to some very timely remarks which in our opinion will bear repetition.

He characterizes the general attitude of the profession today as one of scientific skepticism, receiving nothing upon authority, no matter how ancient or honored, but placing above all, the ability to see things as they are and the drawing of accurate conclusions from the observed facts.

Quoting Huxley, that one who exposes an old error should be as highly regarded as one who discovers a new truth, he adds, "in the overthrow of much of the ancient science of medicine, we must not at the same time lose the many valuable con-

tributions of the past to the medical art, none the less real because based upon wrong theory. \* \* \* We are becoming too scientific; there is great danger that medicine shall become less human. Is it not true that in magnifying the value of medicine as a science there has come about incidentally and perhaps somewhat unconsciously, a disposition to depreciate the dignity and importance of medicine as an art?"

"The men of the laboratory today dominate medical thought. \* \* \* The laboratory is rendering immense service to practical medicine today, but it cannot do away with the necessity for careful bedside observation of the sick; nor are its conclusions to be regarded with the infallibility which, in the mind of many, attaches to them. \* \* \* It is to be regarded as supplementary; but not as the sole important factor."

The physician should be taught to cultivate the habit of observing for himself and to draw correct conclusions therefrom.



"He who flies to the laboratory for a solution of every problem presented in his practice soon comes to be dependent and neglectful, to distrust his own observations, and finally to undervalue all clinical observations."

The art of medicine is neglected to give way to science; *art* and *science* are distinguished in that as a science it has to do with disease, as an art, with people suffering from disease.

The tendency toward commercialism is the one to be most deprecated above all others. "It is perhaps not surprising that our profession, in common with other callings, should feel the baneful influence of this spirit of our age. It is only another evidence of the fact that, in the public mind, material and financial success has come to overshadow every other form of achievement." The debauching of the legal profession to "attain unscrupulous corporate ends" has reached a stage where it has "almost ceased to be a profession and has become only a business, adopting business methods and business standards. May this never be true of medicine. One of the most common ways in which the commercial spirit manifests itself in medicine is in an "inordinate ambition for immediate success."

One with such ideals before him begins by making the shortest possible cut to knowledge, often starting in practice as a specialist, which fact is desired to be known at once. Knowing that the secret of success in modern business is to be advertising, that charlatans have proven its value in medicine, and, while not desiring to become an advertising quack through the newspaper, he adopts other methods. He cultivates the acquaintance of the newspaper reporter, and his name soon finds place in the public press associated with some remarkable operation, an interview regarding a prevailing epidemic, some new ideas regarding the

treatment of tuberculosis and many others, methods and means.

"To some such practices as those described may seem only in bad taste; others, possibly, may regard them as examples of an enterprise almost meritorious. But it is difficult to draw the line as to how far one may go and yet preserve his reputation. Another man, whose moral standards are not quite so high, or whose necessities are greater, actuated by this same motive to get business by every means possible, does not hesitate to take advantage of another physician, or to gain at his expense. He may even be tempted to go to greater lengths and finally end in practices absolutely dishonest."

"The man who allows his mind to be dominated by a desire for financial success readily falls into another temptation, that of allowing his professional judgment to be warped by monetary considerations. \* \* \* An operation is not necessary, and though at another time the surgeon would not himself have advised," but a well-to-do patient, who can easily afford a handsome fee, can readily be taught to believe the imminent danger without operation, associated with his own financial obligations makes the way easy "and possibly justifies himself, in the thought that many of his colleagues would do the same." This is the sentiment, the apparently subtle venom, which is insidiously but certainly attacking the very marrow of professional honor, as it has in modern business—if *I don't do it some one else will, and I might just as well have it*, seems to justify the end with its supposed satisfaction *I beat him to it*. Does this spirit grow out of a desire to excel or out of greed?

"High ethical standards have been maintained in the past by the great body of physicians to a remarkable degree, often in the face of great temptation. Let

us hope that the ideals of the physicians of the future be just as great."

Another form of commercialism is characterized "Medical Graft." "This man does not conceal the fact that he is in medicine for what he can get out of it." The politician's "Where do I come in?" is adopted. He lets it be known among his professional consultants that "the usual percentage" is expected "in case the patient can be persuaded, intimating at the same time that if this be made satisfactory he will need consultations in the case of other patients, and has other work which he can turn over to the surgeon."

It is Dr. Holt's opinion that this type of grafter is not numerous, but increasing rather rapidly. Yes, too numerous, and increasing far too rapidly.

"Such a man belongs to a business, not to a profession," with his reasoning—"Why should I not receive a suitable commission for the business I control? and so forth." When such a principle of action is once adopted, the interest of the patient is no longer his chief concern, but his own pocket.

Another form of grafter is he who feels that it is perfectly legitimate that he exact a certain percentage of the apothecary's receipts from his patients. This form is much less common, however, than is generally supposed.

"The relationships of physicians to one another may be and often are among the most delightful known; whether the members of the profession meet in associations for scientific discussion, or as fellow-workers in the great cause of helping humanity, they form a sort of guild or brotherhood all over the civilized world." \* \* \* But it is humanity to admit that, owing possibly to the very personal character of the competition in the practice of medicine, the feeling of rivalry between physicians too often pre-

dominates over every other sentiment. Even without deliberately intending to do so, they readily yield to the temptation by unkindly and unfraternal criticism, to undermine the influence and to injure the reputation of their colleagues. In smaller places, particularly, where each man works most of the time by himself, these petty jealousies of physicians are very common, but undignified and unworthy." \* \* \*

"In all his intercourse with others of his profession there is only one rule for the physician's guidance, namely, to act toward them as he would wish them to act toward him." \* \* \*

"It is the law of the moral universe that there are no short-cuts to knowledge, no such thing as ready-made experience, and no counterfeit for character. Real and lasting success rests now as always upon honest work and personal worth; or, as Lowell has put it,

"God's price is high; but nothing else  
Than what he sells, wears long."

#### *FALSEHOODS UNDER OATH.*

In a recent personal injury action brought in the District Court at Boulder, Colorado, Dr. J. G. Hainline, of Denver, gave utterance to statements under oath which are far from the truth if directories, college records and figures are correct, and we believe it due the membership, when we are cognizant of such conduct by one practicing medicine in our midst under false banners, that the facts should be given to the ethical profession.

Under the direct qualifying questioning he stated that he had been in general practice eighteen years; that he had lectured in the Keokuk Medical College from 1889 to 1899; that he was a graduate of the Rush Medical College of Chicago.

The medical phase of the doctor's statement of the injuries were little short of

the ridiculous; for example, he stated that the plaintiff had, as an effect of the accident, "injured the kidneys, it has injured the cord leading from the spine to the testicles and private organs generally. \* \* \* caused these organs to thicken and become hard, and it has caused a *renal calculi condition* so that since the injury he has passed a number of stones from the kidney to the bladder. \* \* \*"

Replying to an inquiry regarding the permanency of the effects he stated "but the fact that the kidney has been loosened and the fact that it is not tight today would show to me that it would make him *more liable to have floating kidney in the future* than it would if the kidney had never been loosened."

These statements were sufficient to show the unfitness, and, as well, that for which the medical testimony is so often and justly criticised, namely, an evident desire to favor the side by whom he was employed, but when upon cross-examination he stated that he was not a member of the County nor State societies, and when asked regarding the American Medical Association, he replied: "The American Medical Association, *yes, sir.*" The falsity is obvious. In answer as to whether he was a member at the present time, he again replied in the affirmative.

The new A. M. A. directory is at variance with his statement.

Some of the questions, ridiculous as well as amusing, with the answers taken from the court records, are as follows:

Q. Where is that cord located, and to what is it connected? A. The spermatic cord is connected with the testicle and toward the back, not very far from the kidney. \* \* \*

Q. Where is the spermatic fluid that you say is carried by this cord deposited? A. It is deposited in a little pocket about the lower third of the penis just below the urethra. \* \* \*

Q. This cord you say extends from a point near the kidney downward and connects with the intestines? A. Yes, sir.

*The Court.* Intestines? A. Yes, sir.

Regarding the qualifications sworn to and mentioned above we find the following to be the manner of insertion in the A. M. A. directory:

Hainline, Jos. G., (b. 1862)—Ia. 1'92. (r. 1899.)

which means born 1862, graduated from Keokuk Medical College in 1892, and was licensed in 1899. Precisely the same statement is to be found in Polk's directory.

A letter from the comptroller's office, Rush Medical College, Chicago, signed by John M. Dobson, states that "the name of J. G. Hainline does not appear in our list of graduates. We have had no graduate by the name of Hainline."

We have no comment to make in conclusion. The facts were sufficient and are in themselves *stranger than fiction*.

The evidence of the misrepresentations upon labels of proprietary nostrums are gradually increasing in number. We have learned since the Pure Food Bill became in force that Papine does contain "morphine," and that Vin Mariani has a content of one-tenth grain of cocaine to the fluid ounce. The *Journal of the A. M. A.* contains interesting facsimiles of advertisements "before" and "after" the law. The effectiveness of federal laws over state laws is also apparent.

Five drops of normal tincture lobelia in two ounces of water, half teaspoonful every few minutes, given warm, is advised in many cases of infantile colic, from whatever cause; will soothe nervous irritation and induce sleep.

The Hunterian chancre is certainly a classic form, but seldom observed, the other varieties outnumbering it more than ten-fold.



## Original Articles

### *THE DOCTOR AND THE PUBLIC.*

By E. STUVER, M.Sc., M.D., Ph.D., Fort Collins, Colo.

Ever since Eve plucked the fateful apple in Eden this old world of ours has been raising Cain and having all kinds of trouble. As it is a characteristic trait of humanity, however, to suffer as little, and enjoy as much as possible, in passing through the world, there has naturally been an active demand for something to ease physical pain, soothe mental anguish and furnish a balm for wounded spirits. As such a demand could not long exist without efforts being made to satisfy it, there, very early in the history of the race, arose a class of persons who gave special attention to relieving human suffering. At first the functions of both priest and physician were performed by the same persons, but their efforts were very crude and so clouded by superstition and ignorance that the wonder is, how any good could have been accomplished. But with all these defects, their objects and aims were noble, and this high purpose, aided by man's eager thirst for knowledge, and his determination to penetrate the secrets of nature, resulted in wonderful progress; indeed, so great was this progress that more than 3000 years before Christ, medical science had reached a high degree of perfection in Egypt and other ancient monarchies. Hippocrates and his followers threw a flood of light on the symptomatology and treatment of disease, and shed imperishable glory over ancient medicine. With the decline of Grecian civilization and the fall of the Roman empire, however, there settled over the world a dark pall of superstition, ignorance, plague, pestilence, disease and death, that required more than a thousand years to dissipate. Through this long dark night,

the physician, true to the nobler instincts of his high and beneficent calling, was slowly and patiently seeking for more knowledge and more effective means with which to fight the dread conditions by which he was surrounded. By means of careful experiments and investigations on living animals he slowly laid the foundations of the sciences of anatomy, physiology and pathology, and his professional descendants today are completing the structure by chasing the elusive disease germs to their most secret hiding places and by finding remedies to destroy them. During the last hundred years throughout the whole civilized world there has been a most wonderful development of all the sciences, arts and industries, and I am proud to be able to say that the science of medicine has been keeping step with this progress and has become one of the most potent forces in our modern civilization. Such results as have been attained in checking the ravages of smallpox, the plague, yellow fever, diphtheria, and reducing the enormous mortality that formerly followed surgical operations, as well as checking infant mortality and promoting healthful living, could only be accomplished by well educated, zealous, industrious and self sacrificing men—men who dared to face death and fight disease under its most dangerous and revolting forms.

Hitherto the world has sung the praises and crowned with laurel wreaths the brows of the great generals, the great captains, the great destroyers of human life. It has greeted their successful careers of death, destruction and spoliation with vivas of applause and for their daring and courage has inscribed their names (as heroes) high on the temple of fame. But I tell you, my friends, that the courage which enables men, surrounded by all the pomp and excitement of war, to rush into charges like Austerlitz, Waterloo, Gettys-

burg, Missionary Ridge, or even San Juan Hill, pales before the courage which enables the physician, in the darkness of the night and the silence of death, to face the horrors of a plague infected city, a yellow fever camp, or a cholera scourged district, in order to minister to the sufferings of the stricken ones. Since to the physician's care are confided the life, health, and at times the most sacred confidences of his patients, what sort of physical, mental and moral equipment should he possess in order successfully and faithfully to perform the duties of his profession?

I believe, in the first place, that every young man (and this includes the young woman too), before deciding to enter upon the study of medicine, owes it as a sacred duty to himself and to society, to find out whether he has the natural ability, physical, mental and moral qualifications and educational preparation to do the best work in his prospective calling.

If he has been properly impressed with the magnitude of the duties and responsibilities that will devolve upon him, he will never think of entering upon the study of this most intricate and difficult of all professions without having first secured a broad general education. Without a well trained mind and a good general knowledge of the collateral sciences, on which a clear conception of the underlying principles of his profession largely depend, and a good working knowledge of modern scientific methods and investigations, he will be handicapped at the beginning; and unless he is a man of unusual ability, determination and perseverance, he will soon fall behind in the race and become a mere fossilized attachment to the profession which he should help to advance and adorn.

When we consider the enormous demands made on the physical, intellectual and moral strength of the physician, it at once becomes apparent that our profession

is the very worst possible place for weaklings of any kind. Hence, I desire to insist that every student entering upon the study of medicine should be physically strong and well developed, mentally clear, logical and broad, and morally sound and untainted. To secure such a result our student must be temperate in all things and free from enervating and degrading habits. Intemperance, the addiction to narcotic poison and the indulgence of vices of various kinds will soon sap the physical vigor, becloud the intellect and pervert the moral nature, so that the most promising and brilliant will fall from high and honored positions and end their lives in dishonor and shame. Having the proper natural and educational qualifications, our student should enter a medical college properly equipped to give him the very best possible training and preparation for his life's work.

Since the truth of Pope's forceful lines—

"Vice is a monster of so frightful mien,  
That to hated needs but to be seen.

But seen too oft, familiar with her face,  
We first endure, then pity, then embrace"—

is universally admitted, it is of paramount importance that the training of the student should be entrusted to men of broad cultured minds, humane sympathies and a high moral character. They should have a proper perspective of the duties and responsibilities of life, and should teach not only the fundamental branches and principles which underlie the science and art of medicine, but they should at the same time serve as constant examples of high and noble living. The Golden Rule should run like a shining thread through all their teachings, and by its clear and steady light point out the true pathway to fame, greatness and happiness to their students. They should be taught that when weighed in the balance, honor and integrity are

infinitely above wealth and notoriety, and that a clear conscience and noble character, the results of honest and self sacrificing work, are possessions more to be prized than the combined wealth of all the Rockefellers, Vanderbilts and Carnegies in existence. Thus endowed, educated and trained, the young physician is prepared to enter upon the duties of his calling.

A properly qualified and impartial state board of medical examiners should pass upon the qualifications and character of every applicant who desires to practice medicine, and all incompetent and dishonest persons should be prohibited from preying upon the ignorant and credulous and casting a stigma on an honorable calling.

I have heard the argument used that this would be infringing on individual liberty, and would prevent people from selecting the physician of their choice, providing that choice fell on some one who had not complied with the requirements of the law. In view of the fact that any one who qualifies himself (or herself), by securing a thorough knowledge of the fundamental branches on which medical science is based can secure a license to practice, any unprejudiced person should be able to see that the license requirement only bars out the ignorant, the incompetent and the dishonest. If it is good public policy to require teachers, pharmacists, engineers, horse-shoers and many other trades and callings to possess special knowledge and pass an examination before they are allowed to pursue their vocations, I fail to appreciate the mental bent, or grasp the reasoning of those people who argue for wide open privileges for any one who pretends to be able to correct the defects of the most intricate mechanisms (the human body) in the whole world, regardless of the fact whether they have been properly educated

and trained for the work or not. Again it has been contended that such a requirement is class legislation, and tends to foster a medical trust. This latter argument, in view of the fact that the medical is the only profession in the world that tries to reduce its own business comes with very poor grace. Who ever heard of the sagacious Rockefeller lying awake nights trying to devise plans to prevent people from buying Standard oil? Do you suppose it ever entered the head of Corey to curtail the sale of steel trust products, or that Havemeyer is greatly worried over the constantly increasing consumption of sugar? No, indeed, the mere suggestion of any of these possibilities would raise serious doubts as to the sanity of the audacious individuals who suggested them.

With the medical profession, however, it is entirely different. By means of improved hygiene, sanitary science and other preventive and curative measures, the prevalence and severity of many contagious and infectious diseases have been greatly lessened.

"Physicians are taking an increasingly active part in promoting proper sanitary conditions in our towns, cities and villages; they are vigorously protesting and working against the slums, those breeding places of disease, vice and crime; they are insisting on better health conditions for the pupils in our public schools; they are testing the sight, hearing and physical conditions of school children and pointing out ways by which many dull and listless pupils can be converted into bright and intelligent ones. These and many other things they are doing and thereby helping to advance the cause of science and to raise mankind to a higher and happier plane. But in spite of all these efforts there are a number of widespread evils, sapping the physical, intellectual and moral strength of our people, which I believe it is the duty not only of physicians,



but of all intelligent men and women, to do everything in their power to correct.

As long as more than two million children, who should be in school and out in the pure air and sunshine, developing their physical, intellectual and moral beings, are working in the mines, breakers, factories, mills and sweat shops of this broad land of ours, and thereby poisoning the fountains of our national life and sowing the seeds of disease, crime and degeneracy, there is work for every physician and patriotic American citizen to do. As long as more than a billion dollars a year are spent for alcoholic poisons and all the machinery of our courts is kept busy punishing infractions of the law caused by this traffic and our jails, penitentiaries and insane asylums are kept full to overflowing with the victims of this evil, not to say anything of the ruined homes, the blighted lives and the magnificent intellects destroyed by this all pervading curse, there is an imperative need for men and especially physicians who have the moral courage to stand up and tell the truth about this insidious, death dealing agent. While the religious periodicals, the great magazines, nearly all the newspapers and even some medical journals advertise, and prominent ministers, politicians and other distinguished citizens write fervid testimonials and fulsome eulogies on the most arrant fakes and worst swindling patent medicines that can be concocted, preparations loaded with alcohol, morphine, cocaine and other narcotic poisons and which under the siren and delusive promise of curing disease and relieving suffering (merely create in the deluded victim an insatiable craving and fasten upon him a habit that lures him to his doom; while, I say, such a traffic, based on false pretenses, as this exists and costing our people over \$150,000,000 a year, does them very little good and a great deal of harm, is it

not the duty of every physician, medical society, yea every intelligent citizen to strengthen and encourage *Collier's Weekly*, the *Ladies Home Journal*, the *Journal of the American Medical Association* and other magazines and periodicals that are making such a gallant fight against these strongly intrenched and destructive agencies. Then too, there looms up through an atmosphere of sophistry, selfishness and moral depravity, the dim and grisly spectre of the criminal abortionist, who, by his or her nefarious work is not only cutting off the lives of thousands of innocent, defenceless human beings every year, and making themselves and others murderers, but are implanting a deadly moral virus which if not checked and neutralized will shake, yea shatter the foundations of our civilization. In depicting the consequences of a lowered national morality the brilliant and versatile James T. Whittaker once wrote: "Physical is never so bad as moral corruption. All history shows that though a plague may desolate, it is immorality alone that can destroy a nation. Rome fell not on account of the plagues, and not on account of the Goths and Vandals, but because of the failure in the crop of Roman children." (See *Journal A. M. A.* April 11, 1896, p. 700.) With these facts staring us in the face is it not the duty of every physician and every medical society to do everything in their power to stop this infamous practice and land the guilty perpetrators behind the bars of the penitentiary?

I suppose nearly all of you have had more or less experience with the oily fakirs and blatant charlatans who infest our larger cities and from these foci spread out to the smaller towns and villages and even penetrate to the rural districts. You all know how by their persuasive eloquence, free show exhibitions and other wiles so well understood by

them, they palm off worthless preparations at enormous prices on their gullible dupes. Many of you doubtless still remember your own "Gun Wa," and we of Fort Collins have had experience with the "Turk Doctor," the "Quaker Doctor," and others of a similar kind by whom the public were most completely swindled.

In this connection the question naturally arises: "How does it come that an intelligent community will allow itself to be robbed by the same kind of game over and over again? The only explanation that I can offer is that the great majority of people are ignorant regarding medical science, and noting the disagreements, jealousies and lack of organization among physicians themselves, give credence to the noisy, blatant, travelling fakirs and their half brother, short-cut medical offshoots, and the result is that every new fakir dressed up in a new guise secures multitudes of victims, and while differing as to their claims and methods, all unite in clamoring for an open door, freedom from any test as to their qualifications, and no legal restrictions on their own particular line of work.

In conclusion the question arises: "What are you going to do about it?" I would suggest:

1. Guard well the portal of entrance to the medical profession and see to it that every student is physically, mentally and morally fit for the great work and the high calling to which he aspires.

2. Thoroughly organize the medical profession and get every reputable physician to join and take part in the work of his local medical society.

3. Let every physician uphold the honor and dignity of his profession. Let him be *honest, just and magnanimous* in his dealings with his professional brethren and soon there will exist a greater sympathy and a better understanding between the Doctor and the Public.

\*The Doctor and the Public, by E. Stuver, M. D., Cincinnati Lancet-Clinic, Sept. 29, 1903.

(a) "Professional Honesty," by E. STUVER, M. D., Cincinnati Lancet-Clinic, August 23, 1902.

(b) "The Doctor and the Public." Vide, Supra.

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### THE PHYSICIAN IN POLITICS.

By CHAS. FISHER ANDREW, Longmont, Colo.

I can find no better sentiment to prompt me in the reading of this paper than that given to us by our worthy brother practitioner, Dr. Oliver Wendell Holmes, when he gave to the profession this true axiom on medical ethics, "A physician's first duty is to his patient and his second only to himself. All quackery reverses this principle, and every practitioner who reverses it is a quack."

There will be severe criticism on this paper by some of my fellow practitioners on the basis of the recommendations herein stated as being non-ethical; but I desire to state in the beginning that I do not wish to say a single word that can be criticised as non-ethical and the criticism remain unchallenged.

I desire to get all criticism possible, for if I did not receive any, I would feel that this paper and its sentiments were for naught.

To this branch of politics I endorse the name "American Medical Politics." To all physicians collectively, I don't believe any other system of politics would prove successful.

You may search the world over and I can assure you that you will find all good and honest practitioners of medicine and surgery the most self-sacrificing, patient and charitable body of men and women the world has ever known.

Collectively, medical men do not have the one-hundredth part of the influence

for medical legislation, humanity, and to give their profession legal standing, that a single daily paper, standing in with some political organization, has upon the legislative body of a state or nation. Is this not an awful state of affairs, when we stop for one moment to consider the power we might have if we would only institute medical politics into our societies?

Imagine what strength our House of Delegates to the American Medical Association can show, since it represents directly about 60,000 and indirectly 125,000 regular practitioners of medicine in these United States. I cannot conceive of a single practitioner, who has not a personal following of at least twenty voters. He can influence these toward the up-building of our medical laws and thereby give protection to the people against patent medicines and the irregular practice of medicine. Now multiply 125,000 by twenty and you have the enormous body of voters that aggregates 2,500,000. If the United States senators were to be elected by the direct vote of the people, would not the medical profession have something to say as to the character of the men who compose the personnel of our United States Senate?

Would not the legislatures of our states be composed of men who would feel inclined to show us justice for the protection of the public? A lack of unity has prevented the realization of all our hopes, and if we ever expect to gain, hold and maintain the pre-eminent position to which we are justly entitled, we must unite upon a common medical political basis.

Are not our services for the public welfare as valuable to the people as those of the lawyer? Are we not as much entitled to public distinction as they? Are not our services for the public good as valuable as those of the politician? Are

we not as much entitled to public honors and respect as they? Are not the tire-some hours you have given for charity and public safety as valuable to them as the golden gifts of Rockefeller, the Rothschilds and the Goulds? Are we not as much entitled to legislation to protect our interest as they? Does not justice place us in the same balance, or a little better, with those who claim to have the interests of the people at heart?

If not, the physician has no business in politics, and it would be far better for us to be as we are, and have been for ages, namely, at the mercy of the politicians, the irregulars, the Christian Scientists and the Osteopaths.

Gentlemen, it gives me great pleasure to stand here and proclaim to this body of medical men that neither the physician, nor any man who loves his country, his profession and his home, has any business to be out of politics. If you want clean politics, put on your white uniforms, with brush in hand, and help clean it up a little.

Does not the Hippocratic oath, which you took, prompt your innermost sense of justice to your profession, to protect it from all quackery?

The present organization of the American Medical Association is but the beginning, and I would recommend that this great body of medical men insist upon the election or appointment of a National Committee on Medical politics, that the secretary and president of each and every medical society of these United States be associate members of the same, that a bulletin be published by the Journal of the American Medical Association and sent to every member of the profession who is a regular practitioner, thereby keeping him informed of the wishes and desires of this committee.

We have failed completely in obtaining the support of the mass of the people.



The conditions of our profession are always changing.

The temptations and trials which our profession is suffering today are not those which surrounded our forefathers. They were weak, but thanks to our American Medical Association, we have grown strong. It is a question for us to settle now. We are not desirous of forming new parties, but to teach and purify the ones we now have.

Do you suppose that I cannot be as good a republican and be a firm believer and worker in medical politics as my republican brother in the profession who is working outside of medical politics? Do you suppose that I cannot be as good a democrat and be a firm believer and worker in medical politics as my democratic brother in the profession who is working outside of medical politics? If this is not possible, the sooner we find it out, as democrats and republicans, the sooner we will brush aside our political faith since it brings us naught.

If I thought such politics were demanded of me, partisan as I am, I would rather place my membership to the American Medical Association above all party faith, and live fighting all political organizations for the benefit of mankind.

I have given my life to medicine, and to me it is more sacred than any party platform; "The capacity of man to rule himself is to be proven in the days to come."

Political organization of some sort, however made, is a fact of every stage of human history. The essence of a free government lies in the submission of will to will, sanctioned by physical force and justice.

Our organization is not tinted with the strong desire for political gain. All we desire is protection and some evidence of national respect for our enlistment

into that grand body of workers for the sake of humanity.

It is to Aristotle the world is indebted for the first scientific theory of state and government. He was the first to separate it from all superstition and fancy, and it was he who found the origin of state to be the innate craving of man for the society of his kind, its end, the happiness of the individuals composing it.

We have permitted the public to be educated by patent medicine men, quacks, men of new dogmas and pathys, and we sit still and allow this work to go on unhindered and unmolested. Why? Simply because we have what we call too much self-pride to humble ourselves in politics, and forgetting that the laity looks back twenty-five years, instead of seeing things in the present.

The time is opportune for us to take the public into our confidence, for us to educate them properly in a medical way, for with the people lies the power to bring about great changes in our medical laws.

Are the Osteopaths, Christian Scientists and the patent medicine men better educators than we?

In his individual capacity the medical man never has been found wanting, but it is in a collective way that we are so weak and helpless, and I firmly believe that in medical politics we have the solution of this difficult question.

Will our prominent people, statesmen, politicians, ministers, and ladies of note; continue to allow their photographs to appear in print over signed testimonials in our daily paper?

Let us put on our armor and go before the people with a determination to be heard. Let us do it individually and collectively, and let us have the American Medical Association behind us. Let a doctor arise in our midst who, having the love of his profession at heart, lead and

point out the way. Let us follow him to the primaries, to the county, state and national conventions; let him be a man who has the wisdom of a King Solomon and the vigor of a Teddy Roosevelt. Let him be a man who places his faith in the upbuilding of our noble profession far above party politics. Let each one of the members of the American Medical Association consider himself a committee of one to educate his friends in his political party to justness and righteousness of medical politics. Let us join in the noble work of medical politics to make the degree "M. D." mean something and to know that when the word "doctor" is used that it carries with it more than a delusion and a snare.

Now, don't misunderstand me! I don't mean that we should try to dictate the policy of any party as to finance, tariff, and foreign possessions, but simply for the protection of our people, and thereby gain such medical legislation as will encourage us in the daily sacrifice we make for the protection of our people. What do we care about the criticisms of the pessimists, cranks and trouble makers? I am as much a partisan as any man in my party, but in spite of all this I am not partisan enough, nor do I ever expect to be, to place my party above my profession, for I think the greatest body of men in this world today are those constituting the American Medical Association, and anything they want, I, for one, am ready to go to work and see that they get it.

Now, to do this begin at home, educate your children, your patrons and your townspeople to attend all Board of Trade meetings, primaries and caucuses.

See that the school directors are the proper men, see that the proper ideas on physiology and hygiene are taught! See that the nominations for the legislature are men who look favorably upon medical protection.

Let the Journal of the American Medical Association be our scientific paper and let the *Councilors Bulletin*, which was approved by the American Medical Association in Portland in July, 1905, be our political paper as far as medical politics and other great issues demand.

Did you ever stop to think what a powerful political organ this could become? Imagine the sections of our country that could be reached through the recent organization of our American Medical Association. Every precinct, village, town and city could be reported upon more promptly than any system used by the old parties of today.

Let there be pressure enough brought to bear upon Congress by us to establish a secretary to the cabinet of public health and medical education. Let the secretary, appointed by our president, be recommended by the American Medical Association. Let him have full control of the public health, and let him be the personal advisor to the president as to all medical questions. Let there be founded a national medical school, or university, and let this secretary of public health and medical education be Dean of this university. Let Congress appropriate money enough to maintain it. Let there be also a grand national hospital in connection with it. Let there be a national medical law compelling all graduates of good and regular schools of medicine to attend at least six months, doing post-graduate work at this university, and then his certificate or diploma of post-graduate work entitles him to practice anywhere in these United States or her possessions, and this will do away with your reciprocity laws between states that are attracting so much attention and dissatisfaction today.

I fully believe that professional success, political success or commercial success, or fame or honor, is all waste if not accom-

panied by the desire to do good for humanity.

Listen! Don't you know that among all the pictures of great men who have been voted the honor to be placed in the "Hall of Fame," not one of the medical men is to be recognized? Do you mean to tell me that such an honor is not worthy of our profession? Does not this show you, gentlemen, how little we or our wants are considered? No, we are simply the servants of the dear people, and will always be so, I fear, unless we awaken from this sleepy dream that we have had since the first medical meeting of the Medical Society at London in 1773.

Medicine is founded on a good and scientific basis, but it has been, and is yet, the most abused science in the history of man. Go to the local organizers and inform them that you are in politics, and there you intend to stay and labor.

If you are criticised by your enemies and also patrons for dabbling in politics, don't shrink, but announce that you are in medical politics for their and your welfare. You are the best canvasser that any one could ask for. There is no man who usually stands higher and more respected in a little village or city among his friends and acquaintances than the family doctor. Educate the young, for it is in your power. They run to you with their plea for help, and teach them that you have grievances as well as they. Remember that the doctor's work is priestly in its character, and that his work is as much or more without the medicine case as with it.

Now, to a doctor who will do all this in remembrance of his skill, and for his patience and his good deeds, and for his great part in bearing humanity's burdens, I doff my hat and dub him as my "Ideal Doctor in Politics." If every reputable physician in America was a member of the American Medical Association, and

fulfilled his duty in local organizations, as my ideal doctor in politics does, the power of medical opinion and protection would become invincible.

I feel it is time to bring these hurried, crowded remarks to a close; reject what you see in them that is false, and examine what is doubtful, and please remember what is true.

This is what I have deemed best to say, ponder it; with some things you will agree; with some things you will disagree, but think about it. If I am wrong, the sooner the wrong is explained the better for me, and finally I wish to enlarge upon the sentiment of the future which I have read elsewhere.

The years are passing quickly, and it seems to me that we stand, as some lost traveler, upon a lofty crag that separates two boundless seas, one whose tranquility impresses us of happy future, and the other has the old land marks of a rough and rugged coast.

We are well entered upon the twentieth century, and let us live our part to gain what we may for our noble profession. The past is secure, it is finished and beyond our reach. The words of criticism cannot darken its glories, nor the tears of repentance wipe away its mistakes. Its glories and victories, its honor and shame, we cannot touch.

The old centuries are dead to our profession and all is to be buried with them save the beautiful teachings of Jenner, Harvey, Billworth and others. Their history is finished and they will stand upon its roll of honor forever.

The years that are before us are as a pure white page. We may inscribe them with new ideas and teachings for the further improvement of our profession, and, mark you, the future of our profession rests with us, for the time has come, unless we are extremely careful, that the main footings of our profession will be-



gin to yield to the enormous pressure of irregular medicine.

The happiness of our prosperity rests upon us. The fate of humanity is in our hands, but will it be much longer?

That faint pleading voice of justice is growing weaker; it is already choked with the sob of ages. She has cried out to us and we have heeded not. She has spoken to deaf ears, but now, in her one last effort, I fancy we are going to lend our ears.

She asks us to be brave, benevolent, consistent, professional, kind and true to the teachings of our Alma Mater. She asks us to build up public virtue upon our private worth. She also asks us to be patriotic, loving to our country, to our profession before all other things, making her happiness our happiness, her honors ours, and her fame our own. She asks us in the name of charity and of freedom, and in the name of God, to take a stand politically as a unit under the banner of medical politics, to give to the unprotected humanity a protection to which it is entitled, and through no one else, save the united medical profession, can she ask all this.

#### Discussion.

Dr. S. D. Van Meter, of Denver: I had not intended to discuss this paper, Utopian as it is, but I wish to call attention to two facts which I am surprised Dr. Andrews did not mention. The first is with reference to the suggestion he makes that the American Medical Association should have a Committee on Legislation and Public Policy. Further, the Association has a representative in each state and territory, and state committee made up by one member from each county in the state. (Such a committee exists today and has existed for the past three years.) I had the honor of being state chairman of the committee for Colorado for two years, and Dr. Jayne is chairman this year. I am somewhat surprised that Dr. Andrews did not mention this. The national committee, under the excellent generalship of Dr. Charles A. L. Reed, has done excellent work. I would like to hear from Dr. Jayne as to what the Colorado committee has done this year. I am sure it

has done much good, and will continue to assist in its part of the national work.

The other point to which I would call your attention is the fact that when we come down to practical politics, while we can rightfully claim to be a united profession, there are other state societies which have the ear of the legislature in this and other states that must be reckoned with when it comes to securing practical legislation.

To meet this problem, three years ago the late Dr. Sanford, a medical politician, and one of the best I think Colorado has ever seen to work in the interest of the profession, with some assistance from your humble servant, organized the Colorado Medical Legislative League, and every member of this Society has received a communication from that League. The League meets this afternoon to elect an executive council for the ensuing year, and I would beg of Dr. Andrews and others to attend that meeting to see what this League is doing in the way of harmonizing the interests of the many committees from the different societies. I wish to say that in harmonizing certain other societies they are all minor organizations as compared with this and we do not accomplish any great good in the way of assistance from them. But in the past history of legislation and medical legislation in this state it has been the rocks in the road that have thrown the machine from the smooth track and prevented our gaining the goal. This League has accomplished that, if nothing more, in that it has kept out obstructionists, and when you have done that you cannot estimate too strongly how much has been accomplished.

Dr. Boyd: I have a few reflections in regard to the physician in politics. It would be well for us to acquire a more definite knowledge of the function the doctor performs for the social organism. We can then determine our rights, and, as a profession, demand such laws as defined and protect them. There is no question but that the medical profession now performs a vital work for society. That existing civilization would perish without the services constantly rendered it by the medical workers. Our rights are co-extensive with the services rendered, and both society and the doctor are best served when the full value of the services are recognized, and the particular rights arising from them defined and protected by statutory laws.

We have a right to demand social justice in common with all citizens, and the duty of

asking of our government all laws for enforcing the necessary precautions for general hygiene and sanitation, and for such other legal and educational provisions as will protect us as a body of workers, from dishonest and incompetent members. I think it is incumbent upon the State not only to require special training and education for the doctor, but to include in its scheme of public education the opportunities for acquiring such training and knowledge. This is now being done in our own and many other States. This reduces the cost, brings unity into the whole plan of education, and should so relate the development of the mind and the acquired knowledge as to serve both purposes of development of intellectual vigor and useful knowledge.

Can the doctor safely enter into medical politics without giving consideration to other political questions arising from our social and industrial evolution? I think not. The life of a nation is the sum of all human conduct composing it. It is made up of many groups combined by a more or less perfect interplay of inter-dependent parts of varying importance. Politics has to do not only with defining the rights of individuals, but the relations and rights of the various groups of workers. Medicine is not as essential as agriculture. Ignorance and injustice in the agricultural group will render ineffective the most complete knowledge on the part of the medical workers. A competent doctor feels his power for good ebb and flow with the intellectual status and social advantages of the homes and communities he serves.

The point I wish to emphasize is that medical politics cannot be intelligent, purposeful, or respectable when considered apart from the great social problem of which it is a part. The doctor's usefulness depends more upon universal justice than upon special medical laws. We need to give every political question careful thought and fearless action. If you believe that the natural resources of the earth are unjustly withheld from the majority of citizens; that franchises are grants to individuals of a power to tax communities; that tariffs are of the same nature; that municipal control or ownership of public utilities is right; that railroads are public highways subject to control of state or national government, these beliefs should rest upon something more substantial than party bias or selfish interests. These are all problems political that we must help to solve. As a

learned profession we can be of great help in unraveling the political problems now presenting themselves for solution. Hence I believe the doctor should enter politics first as an earnest citizen, using all the advantage of his liberal education and knowledge of biologic phenomena to help him to right conclusions on all political problems. If he thus enters upon the broad plain of social justice, he will command the co-operation of all justice seeking forces when he asks for justice in his own field of labor.

Dr. Peter D. Rothwell, of Denver: I do not think it is quite correct to speak of this able paper read by Dr. Andrews as Utopian. That is generally associated with something in the great future, that you may reach after several thousand years. There is nothing Dr. Andrews has read but what we can reach and reach soon.

Seven years ago I had the honor of reading a paper before this association, the title of which was, "What Do the People of Colorado Need More Than a Medical Law?" I circulated through the state at my own expense 5,000 copies of that paper. I was in earnest. The physicians of France, whom we all recognize as an able body of men, not long ago advocated exactly the same principles I advocated in my paper. My paper took well among a certain class of physicians at that meeting, but it was criticised by a few as being Utopian. It was too far advanced. Some said, "The People Be Damned." Why should we take them into our confidence and educate them? That was not the feeling I showed in my paper. We need to get in touch with the people, to educate them, so that they will help us, and when we educate the people to higher standards and to see things as we do, then we will have a chance of putting down quackery, and until we do that we will not, because quacks will manage to keep themselves in touch with the people at all times in season and out of season. I do not think that Dr. Andrews' paper is Utopian; it is an up-to-date, sensible paper, and while the paper I read seven years ago may have been a little ahead of its time, the people and profession will wake up and get to that standard as they have done in France. We should wake up and get in touch with the people.

I was in politics two weeks ago. I went with the best intentions in the word. I went through a cleansing process in my mind, ready to spew out all dead-beats and grafters, and all such creatures from the Democratic party. I

went in, and I came out. I found out that I had not as much influence as a four-year-old boy. The matter had all been fixed beforehand. I voted every time in the minority but once, and in order to preserve my self-respect I got out. (Laughter and applause.)

Dr. Andrews (closing the discussion): I feel like closing this discussion, after the criticisms that have been made on my paper, with a little story.

It seems that a man in old Virginia, who was running a tannery, wanted to change his location. He went a little farther down into the city and put up a little building near one of the prominent streets, and the question came to his mind what kind of a sign he could put up to attract the people, to get them interested. He finally decided to bore a large auger hole in the side of the door and place a cat's tail in it with the end out. Finally, an elderly looking gentleman came down the street, saw this sign, stopped, watched it, and the owner of the building noticing that he was much interested, stepped out and said: "Any hides to sell?" "No." "Want to buy some leather?" "No." "Are you a merchant?" "No." "Are you a lawyer?" "No." "Farmer?" "No." "Doctor?" "No." "What are you, then?" He says, "I am a philosopher. I have been standing here thinking and meditating how in the devil that cat got through that hole." (Laughter and applause.)

### *CONGENITAL HYPERTROPHIC STENOSIS OF THE PYLORUS.*

By C. B. LYMAN, M.D., Denver, Colo.

This short paper is prompted by a case coming under my care some months ago, and seen by me through the courtesy of Drs. Bartholomew and Hall. The history of the case is, briefly, as follows:

Baby X— was born of a healthy mother, it being her third child and a male, weighing five and a half pounds at birth; the labor was normal in every respect. A short time after birth the child had several passages from the bowels, consisting of meconium, and from that time on, there were no stools. Vomiting began as soon as food and water was administered, and continued at intervals, being brought on by the taking of food or water and by

any muscular effort such as crying, or deep breathing. I was called to see the baby on the morning of the fourth day when I found a male infant much emaciated, crying and vomiting continuously, sometimes in gushes and sometimes the vomitus was simply running from the mouth; there had been no stool since shortly after birth; the pulse was rapid and of very bad inequality; the temperature was sub-normal.

Examination of the abdomen showed the upper left quadrant bulging quite markedly and the stomach could be easily mapped out, and was considerably dilated. A diagnosis of pyloric obstruction was made and an operation advised. This was done at once, without a general anesthetic. It was a fact worthy of mention that the only time the baby showed evidence of suffering pain was when the primary incision in the skin was made and when the final stitches were put in the abdominal wound; during the remainder of the operation the baby lay quietly, and during a portion of the time was apparently asleep. Upon opening the abdomen the stomach was found considerably dilated and the intestine extremely small. In as much as it seemed that we had to deal with a complete obstruction of the pylorus any of the operations having for their purpose the enlarging of the pyloric orifice were out of the question, and the only procedure worthy of consideration was that of gastro-enterostomy, and this was accordingly done. It was not an easy matter, as the jejunum at the point selected for the anastomosis was about the size of a straw. It was, however, accomplished by the usual method of suture, the jejunum being united to the posterior portion of the greater curvature of the stomach through an opening in the meso-colon; the time required was about twenty-five minutes. The baby showed no signs of shock; the



vomiting, which before had been continuous, stopped entirely and the infant took and retained whiskey and modified milk and seemed to enjoy it. It stopped crying and slept; when awake it was bright and apparently suffered no pain. The operation was done at 11 o'clock in the morning; the baby died the next morning at 6 o'clock with no symptoms other than those of exhaustion. An autopsy was made and the anastomosis was found to be perfect, anatomically and functionally, as the small intestine was found to contain much material; the stomach was thoroughly drained and there had been no leakage, the pylorus was found to be completely occluded.

Had the condition been recognized and remedied earlier I fully believe that the baby would have lived, for it was evident that the operation did not produce shock nor did it shorten the baby's life.

There have been about fifty cases reported of so-called congenital pyloric obstruction. Canthy and Dent in the *Lancet* for December 20, 1902, collected the reports of some fifty cases, of these nineteen were operated, out of which two recovered; all of the unoperated cases died. All of the cases, the histories of which I have been able to find, were those of partial stenosis, some of those reported may have been complete, but the case I report herewith is, as far as I know, the only one. In most of the cases the symptoms did not appear until the infant was about three weeks old and consisted of persistent vomiting—this being often projectile in character—constipation, emaciation and upon examination a dilated stomach was found, in which usually peristaltic movements could be seen and in some of the cases a mass could be felt in the epigastrium. The diagnosis is made in these cases upon the finding of a dilatation of the stomach together with visible stomach peristalsis; vomiting and

constipation are symptoms of secondary importance in the diagnosis.

Opportunity has been given us to study the pathological conditions present, as almost all of these cases have died. The conditions producing the stenosis are two, first a hypertrophy, especially of the outer muscular coat, causing a narrowing of the lumen of the pylorus, and, second, a fold of hypertrophied mucus membrane at the pylorus which acts as a valve to cause the obstruction. In the case I have reported there was a distinct thickening of the wall of the pylorus as compared with the thickness of either the stomach or duodenal walls in the immediate neighborhood.

No satisfactory theory has been advanced to explain this condition; the two held forward by observers are: First, that it is due to simply a fetal overgrowth, and, second, that it is an incoordination of the gastric muscular tissue resulting from functional trouble of the gastric nerves; of the two, the former seems to be the more rational.

Treatment, as suggested by most observers, is directed toward increasing the size of the pyloric lumen by doing either a pylorotomy, a pyloroplasty or a gastrotomy for the purpose of doing a digital or instrumental dilatation of the pylorus, and they advocate these procedures rather than a gastro-enterostomy, claiming that there is economy in the time required, and that such operations are more easily done, and at the same time they mention gastro-enterostomy as a procedure which may be carried out. That these operations are possibly to be preferred to gastro-enterostomy is true in the class of cases reported by most of the observers; that they would be of no avail in those cases where the obstruction was complete is equally true; in these cases nothing but a gastro-enterostomy should

be thought of, and that it can be done quickly without the administration of a general anesthetic or the production of shock was demonstrated in the case here reported, though I must admit that owing to the lack of development in the small intestine and the resulting small size of it, it is an operation requiring great care and skill. A diagnosis should be made as early as possible in order that an operation may be done before exhaustion becomes extreme.

Townsend, in the *Boston Medical and Surgical Journal* for February 11, 1904, has collected the records of nineteen cases operated upon, one by pylorotomy, nine by gastro-enterostomy, six by gastrotomy, with dilatation of the pylorus, and three by pyloroplasty. Canthly and Dent report two cases in which pyloroplasty was done with recovery.

#### *GASTRO-ENTEROSTOMY, WITH REPORT OF CASES.*

By DR. I. B. PERKINS, Denver, Colo.

Gastro-enterostomy is said to have been performed as early as 1849, but a successful case was not recorded until 1875, and even fifteen years ago the operation was rare and was accompanied with a mortality of about 40 per cent. Since that time great advances in stomach surgery have been made and it is in the past five years that most of this work has been done. The literature on the subject prior to five years ago is very scant. Now the journals and recent books are full of articles recording the splendid experiences of surgeons all over the world.

In the earlier history of the operation the method used was generally to attach a loop of the jejunum to the anterior wall of the stomach. This was usually done with the aid of some mechanical appliance, such as the Murphy button. Now the operation done by most surgeons, and

the one that was performed in these cases, with one exception, is a posterior gastro-jejunosomy, making the attachment by means of clamps and suture, using a form of linen suture, so prepared as to leave it strong and yet render it absorbable after a time.

This operation is more frequently performed for the relief of stagnation, caused by an obstruction of the outlet of the stomach. The obstruction may be in the nature of a benign or a malignant growth occupying the duodenum, or pylorus, or it may be that the stenosis is caused by adhesions to these organs, or by an indurated chronic ulcer, either in the duodenum or pylorus. Acute ulcer operated during an attack is not likely to be much benefitted, except in a case of alarming hemorrhage, or perforation, and in these conditions it is not always best to do a gastro-enterostomy, but frequently one must be content to either excise the ulcer, or close the opening at the point of perforation, or in case of hemorrhage to cut down and tie the bleeding vessels.

Diagnosis of gastric ulcer is not always an easy task. Especially if one attempts to make a positive diagnosis. A probable diagnosis is not so difficult. When these cases consult the surgeon it is usually after they have suffered for a long period and after they have been treated by many medical men, as a rule with some benefit following each new line of treatment. Their histories usually show a long period of digestive disturbance, causing tenderness and pain over the stomach, occasionally hematemesis, usually hyperacidity and later gastric stagnation. Sugar and starch taken to excess appear to be the articles of food causing early symptoms in many cases. The formation of gas causing distress, pain and eructations of food partly digested are usually the first symptoms observed. All of these symptoms are by no means always present, but when

persistently present are generally caused by chronic ulcer. If the greatest success is to be obtained in this work the surgeon and internist must work together, and must together decide which case should be treated medically and which should be subjected to operation. In a recent discussion Dr. Rodman is reported to have said that he believes that medical treatment should be carried out for four weeks, and then if not successful it should be followed by surgery. He also stated "that chronic ulcer is rarely cured by medical means." Patients suffer a greater proportion of shock in stomach operations than in many of the other abdominal operations, and on this account rapidity of work, with accuracy, allowing the shortest possible anesthesia, is the plan to be followed. A hypodermic of morphia and atropia given twenty minutes before the anesthetic is begun is a good practice and will lessen the shock. At the present writing I have operated thirty-two cases of gastro-enterostomy. In one case the Murphy button was used and an anterior anastomosis was made. In thirty-one cases the posterior operation by the suture method was used. In several of these, among the earlier operations, a rather long loop, with an entero-anastomosis, was the operation adopted, but in most of them an anastomosis was made to the jejunum, the point selected being as near the entrance of the bowel into the larger peritoneal cavity as possible. An opening at least two inches in length being made and in a line with the natural position of the bowel. After the anastomosis is made the torn edges of the opening through the meso colon, through which a portion of the stomach is drawn for attachment, is stitched to the stomach about half an inch above the anastomosis in such a manner as to form a funnel-like entrance into the intestine from the stomach, thereby facilitating drainage and also tending to pre-

vent bile from entering the stomach, and food which might pass the pylorus from re-entering it.

The after treatment in these cases consists in morphine or codene, if needed to ease pain, and stimulation by hypodermic injection as required. If no vomiting, patient is allowed to take hot water or weak hottea in five or six hours after operation. If there is much thirst before patient is able to take water by mouth, salt solution is given by rectum by the Murphy, or slow method. As soon as the patient has regained consciousness the bed is elevated to an angle of thirty or forty degrees and patient's position is maintained by means of a swing. On the second day, as a rule, broth or beer may be taken, and on the third day soft boiled eggs. By the fifth day he may have tender steak and may be placed in a wheel chair for an hour. At the end of a week patient is able to walk about his room, and by the end of the second week will be able to take ordinary food as desired and will walk about the yard with comfort.

In these thirty-two cases there were seven deaths. These all occurred in the desperate list. One death was in a case that also had gall bladder disease. This one died of fatty degeneration of the liver. Two were neurotics in badly obstructed cases. These were thought, before operation, to be chronic ulcer, but were probably cancer. The other four were all in advanced cancer cases and the operation was undertaken only with the thought of giving temporary relief.

The thirty-two cases were grouped as follows: Acute ulcer, with frequent hemorrhage, one. Cancer and ulcer cases in bad condition at time of operation, the operation being performed for temporary relief only, nine. Cases of ulcer complicated with gall bladder disease, gall stones, or having symptoms of these dis-



orders, five. Chronic ulcer cases in which there was a marked neurotic element in addition to the dyspeptic symptoms, four. Ulcer cases where indigestion, dilatation and stagnation were the principal symptoms, thirteen.

The twenty-five cases have all been much benefitted except one. This was the one with acute ulcer, in which there were several hemorrhages. Some of the cancer cases have been remarkably benefitted and a number of the ulcer cases have apparently been cured. There was one case of vicious circle relieved by second operation.

Following is a short clinical report of some of these cases:

(10) Miss C. A young woman about nineteen years of age. Has had stomach trouble for some months. Has been unable to eat anything except ice cream for several weeks and has been in bed six weeks. Vomits frequently, occasionally some blood. Operation revealed acute ulcer, the site being readily located by the congested condition of the stomach, about two inches from the pylorus on the anterior wall. The congested appearance at other points made it probable that other small ulcers existed. Did a gastro-enterostomy. Patient's progress following the operation was good, but a few weeks later she returned complaining of considerable distress on taking certain kinds of food and had some hemorrhage following. She has had more or less disturbance ever since that time, which is a year and a half ago. Eats a little greater variety of food and has less trouble digesting it. Upon the whole has received little benefit from the operation.

(1) Mr. L., aged thirty-five years. Has pulmonary tuberculosis. For several years past has had stomach trouble, first finding that he could not digest certain articles of food, later almost all food distressed him. For several months prior

to operation was able to retain very little food. Would eat cautiously and would usually vomit the meal soon after eating. Occasionally would retain it for several hours. Patient was very much emaciated and complained of great pain and distress in the stomach. A mass larger than a hen's egg could be felt at the pylorus. Operation was undertaken for temporary relief only. Operated April 5, 1904. Found what was supposed to be a cancer of the pylorus as large as a lemon and irregular in shape. There were many adhesions to the mass from all sides and the glands posterior and below the stomach were involved. An anterior anastomosis was done, Murphy's button being used, and re-enforced by cat gut suture in the peritoneum surrounding the button. Patient recovered quickly from the shock of operation, in a few hours was able to retain water, and in three days could take liquid nourishment without distress. Recovery was slow, the button was not passed for more than two months and was decomposed in places. At the end of the third week symptoms of strangulation came on with pain in the right iliac region. A mass could be felt there supposed to be the button. By manipulation I was able to relieve this obstruction. Patient gained flesh rapidly and ate well and was fairly comfortable for several months following the operation, but died at the end of eight months from his tuberculosis, having had several months of comparative comfort.

(2) Mrs. P., November 26, 1904. Prior to January 1, 1904, patient had occasionally suffered from indigestion, but had not had trouble enough to call especial attention to the stomach, the principal symptoms being hyperacidity and the formation of gas. At this time digestion became poor and patient was troubled with constipation, had a burning sensation most of the time and sharp pains in the

right epigastric region. About April 1, 1904, she began to have occasional chills, which were followed by rise of temperature. Often had headaches. June 1st burning sensation worse, would vomit about once a day, gradually grew worse in every way, lost flesh, vomiting became more frequent and more severe. October 1st would vomit two or three times a day, vomitus consisted of a dark brown, or greenish fluid, containing considerable mucous. Suffered from pain in the bowels, mostly on the right side. Constipation extreme. No food passed through the stomach. Food or water taken would be retained for an hour or two and then ejected. Stomach was somewhat dilated. Operation for temporary relief November 26, 1904. Did a posterior gastro-enterostomy and an entero-anastomosis below was done, clamps and suture being used. Patient reacted well from the operation, was able to take water within a few hours, and in a few days took plenty of liquid nourishment. Ate beefsteak and eggs within a week and had no trouble whatever with the digestion. Constipation was relieved. Continued to improve, gained flesh rapidly, and could eat anything she desired. This continued for about six months, when metastatic symptoms appeared. The growth began to enlarge and there were some obstructive symptoms. Patient died a year after the operation, having had about eight months comfortable life as a direct result of the gastro-enterostomy.

(8) Mr. H., age 60. For about a year patient suffered severely from stomach trouble, principally indigestion, was not marked at first, gradually grew worse until three months before operation, vomited meals an hour or two after eating. Lost forty pounds in weight during these three months. Went to California and spent three months, was not benefitted. Exam-

ination of stomach contents after a test meal showed a little lactic and a very little hydrochloric acid. Operated March 25, 1905, found a mass as large as an English walnut, supposed to be cancerous, occupying the pylorus, a small portion being on the duodenal side. I wished to do a pylorectomy, but owing to his emaciated condition decided to do a short loop gastro-enterostomy and after he became stronger to advise a pylorectomy. Patient recovered rapidly from the operation, began to eat freely of any kind of food he desired, and experienced no discomfort from it. I sent him to his home in Pennsylvania to gain strength before undertaking the second operation for the removal of the pylorus. May 18th, nearly two months after operation I received a letter from him in which he said: "My health is improving, my appetite is good, and am gaining in weight right along."

(12) Mr. T., aged sixty-four years. Health good until January, 1905, when stomach trouble began. There was an entire loss of appetite. Food would remain in the stomach and ferment and was then vomited. Had a smarting pain in stomach all of the time. Was constipated. Lost weight rapidly and got so he could retain nothing in the stomach, not even beef juice or water. Lost ninety-five pounds in weight in nine months. Was operated September 16, 1905. Found a mass as large as an English walnut occupying the pylorus. This mass was nodular and hard and appeared to be malignant. Stomach was only slightly enlarged, due perhaps to the fact that no food had been taken by mouth for several days. Did a posterior gastro-enterostomy. Patient began to take liquid nourishment the second day and has gained rapidly since operation. Has gained sixty pounds, his weight now being 220 pounds. About six months after the operation patient returned complaining of a little of the old pain in the

region of the pylorus. He was placed on Holadin and Trypsin, as advocated by Dr. Beard of Edinburgh, and soon the pain ceased. Eats anything he wishes and realizes no discomfort from it. This was a most desperate case.

(7) Mrs. S., aged thirty-four years. Gastro-enterostomy and entero-anastomosis. For ten years patient had been troubled with indigestion, which was especially characterized by the accumulation of gas and a distressed feeling, with pain after meals. Always nausea and occasionally vomiting. At times after eating something that did not agree, would have severe pain in right epigastric region. Was visiting in another city, and after a hearty meal taken late at night had a severe attack of pain. The local physician called in the case diagnosed gall stones and advised an operation. A dose of morphia relieved the severe pain and the patient returned to Denver. On examination found the stomach much dilated and tender. Diagnosed ulcer, with possible gall bladder disease. Operated March 21, 1905, and found a "saddle" ulcer of the pylorus. Patient recovered quickly from the effects of the operation and has been able to eat anything she desires since. Has gained flesh and appears in every way to be well.

(16) Mrs. W., aged sixty years. Gastro-enterostomy and gall stones. Has had occasional attacks of indigestion and several colicky attacks during the last few years. Distress after eating was marked and antedates the colicky attacks, and was the most prominent symptom. Dilated stomach was an inch and a half below umbilicus. There was always residual stomach contents present. Operated November 4, 1905. Eighteen gall stones were removed and gastro-enterostomy was performed. An indurated scar was found on the posterior wall of the stomach, apparently extending into the duodenum.

Recovery was rapid, and ten months after operation is still in good health and eats anything. Dilated stomach and gall stones were diagnosed three weeks before operation while doing a hysterectomy for uterine fibroid.

(24) Mrs. H., age forty years. First had stomach trouble nine years ago. That attack came on following a hearty meal, principal symptom being severe pain. Following this, patient suffered from indigestion and constipation. Taking of food gave more or less pain. Attacks always attended by vomiting. No hematemesis. Very tender over stomach. Stomach was dilated. Operation April 4, 1906. Found dilated stomach caused by obstruction due to an indurated gastric ulcer just within the pylorus and on the upper side. Gall bladder contained several stones, but duct was not obstructed. Did a posterior gastro-enterostomy, made a stab wound  $2\frac{1}{2}$  inches to the right of the other incision, drew the end of the gall bladder through it, and stitched it in the opening. Then opened the bladder, removed the stones, and drained with rubber tube and gauze. Patient convalesced slowly, but has finally recovered, and is in better health than she has been for four years.

(13) Mrs. M., aged forty-two years. November 4, 1905. Gastro-enterostomy and gall stones. Symptoms had been those of gall stones, having had colic attacks at various times, also had much distress after eating, which lasted at times until next meal. This began with slight disturbance about two years ago and has gradually grown worse; consulted me for large uterine fibroid, which was supposed to cause all the trouble. Operated fibroid and confirmed other diagnosis. Operated for gall stones and did a gastro-enterostomy three weeks after hysterectomy. Recovery was slow, patient having more or less cough all the time from bron-



chial irritation, but digestion was only slightly interfered with. Eighteen months later stomach is in fine condition.

(9) Miss S., aged nineteen years. Gastro-enterostomy and enter-anastomosis. Patient was operated two years before, one breast being removed for a growth of some kind, operation performed by Dr. Mayo of Rochester, Minn. Soon after this operation stomach symptoms developed, patient complaining of distress in the stomach and a burning pain, some gas, did not vomit, but could scarcely take any food without distress, fasted frequently on account of the distress food would give. Lost flesh, was very thin, was also very nervous. Stomach was dilated and tender, the tenderest spot being over the pylorus. Operated April 1, 1905. Found a contracted pylorus with small ulcer in the anterior inferior portion, just within the grasp of the pylorus on the stomach side. Did a gastro-enterostomy and an entero-anastomosis. Patient recovered rather slowly, having much fear of distress on taking food, but when induced to take plenty of food with the assurance that it would not harm her, took it and digested it without difficulty. Has regained her health, eats anything she desires, quantities of candy included.

(29) Mr. H., age forty-one years. Carpenter. Father died at seventy years of age from some stomach trouble, supposed to be cancer. Patient has had several attacks of what was supposed to be typhoid fever. Is thin, care-worn and nervous. Has had more or less stomach trouble for the past nine years. Early symptoms, distress after eating certain articles of food. Disturbance gradually grew worse. Gas, distress and pain were the principal symptoms. Later food would remain in the stomach and ferment and was then vomited. No hematemesis. Stomach is very much dilated and pressure disturbs heart's action. Diagnosis, dilation and

stagnation, probably caused by gastric ulcer obstructing the pylorus. According to the statement of the patient this same diagnosis had been made by a number of Denver physicians. Operated August 11, 1906. Found a much constricted pylorus with an indurated mass just within the stomach at the upper part of the pylorus and on the posterior wall. A little anterior to this was a puckered scar, showing that a previous ulcer had almost perforated. Operation was by suture method. Patient was very nervous and apprehensive from the start; this symptom was present to such an extent that recovery was made slow thereby. However, at this time patient eats well, digests his food, and is gaining flesh.

(14) Miss C., September 23, 1905. Very nervous. Gas and distress after eating. Stomach dilated and much indigestion. This had continued for several years, disturbance being slight at first and gradually increasing until patient was in a state of invalidism. Gastro-enterostomy for ulcer in the duodenum. Recovered quickly and gained flesh rapidly, and for some months was much improved in health. Now finds it necessary to take a careful diet, but is in good flesh and has much less stomach trouble, and upon the whole is in much better health, though is still nervous. Was badly constipated before operation; has very little trouble of this kind now.

(25) Mrs. H., aged thirty-eight years. For five or six years has been troubled with indigestion. Distress, pain and gaseous distension being the principal symptoms. Stomach was much dilated. Did a posterior gastro-enterostomy April 21, 1906. Found an indurated chronic ulcer in the stomach with a small portion of the ulcer within the grasp of the pylorus. Patient recovered slower than is usual, and while much benefitted, still has slight digestive disturbance.

(32) Mrs. L., aged forty-eight years. This patient has suffered for ten years. Has been troubled with indigestion and stomach disturbance resembling gall stone attacks for the past three years. Within the last year these symptoms have grown worse. Has had a great deal of pain in the right epigastrium, thought to be due to the gall bladder. Exploratory incision was made. Found the gall bladder and liver of normal size and appearance. The stomach was very much dilated and very much congested. There were a number of points where the congestion was more marked, showing the probable site of ulcers. There was an indurated mass as large as an English walnut, irregular in shape, obstructing the pylorus. It was mostly on the duodenal side. There was a chain of enlarged glands leading off from the pylorus, both above and below. One of these near the pylorus was taken for microscopic examination and proved to be non-malignant. Did a posterior gastro-enterostomy, suture method, October 6, 1906. Patient reacted well from the anaesthetic. Vomited a little two or three times within the first twelve hours. The vomitus in each instance contained a little blood. Since then the patient has done well and at this time is able to take nourishment, and in all probability will make an uninterrupted recovery. P. S., May 9, 1907.—Patient did well and has been free from symptoms since operation.

(31) Miss S., aged thirty years. Has had periodical headaches for ten years caused by attacks of indigestion. Has had more or less stomach trouble and digestive disturbance since twelve years of age. The principal symptoms were pain and distress, with the accumulation of gas on eating a full meal, or when taking much starchy or sweet food. These symptoms have gradually grown worse until within the last year they have rendered her almost an invalid. There is no history of

hematemesis. Stomach much dilated, reaching to the umbilicus, with the greater dilation at the cardiac end, pressing on the heart, causing pain and irregular breathing and palpitation. Operation September 15, 1906. Found an obstructive mass caused by an indurated ulcer in the duodenum. Performed gastro-enterostomy. Patient recovered rapidly from the operation and sustained very little shock. Vomited twice following the anesthetic. Vomitus contained a little blood. She now finds it unnecessary to restrict her diet, is gaining flesh rapidly, and appears to be entirely well, though, of course, is not strong yet.

(27) Mr. M., age sixty-two years. Miner. Normal weight 168, height five feet nine inches, weight now 140 pounds. Was well up to four years ago, when he began to vomit meals immediately after eating. Grew worse. Very little gas, no acidity noticed. Constipated the last six months. Obstruction of the pylorus diagnosed by his family physician, confirmed by myself. Found the stomach very much dilated and tender and decided on an exploratory incision, which was done July 14, 1906. Found obstruction of the pylorus due to a chronic indurated ulcer. Did a gastro-enterostomy. Since which time he eats a careful diet, has gained nine pounds, and upon the whole is much improved.

(26) Miss S., aged thirty-five years. Patient has had stomach trouble for five years. Scarcely any food could be taken without it causing distress. Lost weight rapidly. Would vomit meals and suffered from colic attacks. Color bad. Constipated for fifteen years. Operated May 26, 1906. Found a posterior pyloric ulcer and did a gastro-enterostomy. Recovery was rapid after operation; a little distress was experienced from the stomach, but it soon subsided. Complexion has cleared since operation and constipation has been en-

tirely relieved. Eats anything desired without distress.

(23) Mr. L., aged fifty-five years. Business man. For sixteen years has had stomach trouble, starting in with mild indigestion, with occasional attacks of gastritis, apparently caused by taking certain articles of food that did not agree with him. The attacks grew worse and closer together, with more or less disturbance in the interval. Pain, distress and the formation of gas following meals were the principal symptoms. Symptoms worse and more constant up to time of operation, which was April 3, 1906. At this time he would vomit almost every day, had to be very guarded with his diet. Food taken into the stomach would ferment and remain there until vomited. At times would vomit food that had been taken three days before. Stomach was very tender on pressure and enormously distended. Diagnosis of obstruction with probable chronic ulcer was made. Exploratory operation revealed obstruction at the pylorus due to an indurated gastric ulcer on the posterior wall. Gastro-enterostomy by suture method was performed. Complete relief from symptoms followed immediately. Began taking liquid food within two days and was eating practically everything he wanted when he left the hospital. At this writing has not vomited since operation. Eats anything he wishes, including cucumbers and raw onions, and has no trouble whatever with his stomach. Has gained forty pounds in flesh and feels well, and does his work with an energy and enthusiasm unknown to him in years.

(22) Mrs. A., aged twenty-six. Was frail as a child and until womanhood was reached. Has suffered from attacks of stomach trouble for about ten years. During all this time had to be careful as to what was eaten. At time of these attacks pain would come on immediately after meals, later would become continuous and

severe. Spells would appear whether food was taken or not. There was a great deal of vomiting, vomitus containing much mucous, but does not remember having vomited blood. There was much gaseous disturbance and always soreness about the stomach and in the back after these attacks. In the fall of 1904 had a very severe attack. Dilation of stomach interfered very much with heart's action. Scarcely any food could be retained. Lost weight and was in every way miserable. Symptoms gradually grew worse until operated February 3, 1905. Posterior gastro-enterostomy was done. A large indurated ulcer was found at the pylorus, a small portion extending into the duodenum. Several glands below the pylorus were enlarged; one of these was taken and examined histologically and found to be non-malignant. Patient reacted well from the operation and in a few days was able to take easily digested food. She gained seventeen pounds the first two months after operation, and now, after eighteen months, appears perfectly well.

(21) Mr. E., aged thirty-four years. For several years has been troubled with indigestion of a gaseous character, at first very slight, later more severe. Seldom vomited meals. On examination I found the stomach very much enlarged and tender over the pylorus. No thickening could be felt. Total acids increased, slight increase of hydrochloric acid. Operation January 20, 1906. Found an indurated ulcer in the posterior wall of the stomach at the pylorus. This mass appeared to be benign in character and was about the size of an almond. Did a posterior gastro-enterostomy. Operation gave complete relief and patient began at once to eat all kinds of food and increased rapidly in weight.

(18) Miss R., aged thirty-five years. Teacher by profession. Has had stomach trouble for ten years. Never vomited



blood. Has for years had a great deal of gaseous disturbance after eating, especially after taking sweets or acids. Always constipated. The worst attacks would usually come on about an hour after meals, sometimes, however, distress would appear immediately after eating. More or less distress was always present. Never a sharp pain, no colic attacks. Had severe sick headaches, which were occasionally so severe that it was necessary to administer morphine. These headaches were always during attacks of indigestion. Had headache slightly, following operation, for a time, but is now (October 1, 1906), entirely free from them. Operation was November 11, 1905, and was a posterior gastro-enterostomy for stenosis, caused by an ulcer in the pylorus on its posterior wall. Can eat anything she desires now and does not know what indigestion is. There is no constipation. Constipated for ten years previous to operation.

(20) Mr. D. Was sent to Colorado for tubercular trouble. Stomach symptoms were supposed to be due to the tuberculosis. Stomach was dilated and distress and vomiting followed meals, usually about an hour afterward. Did a gastro-enterostomy December 19, 1905, and found an obstructive gastric and duodenal ulcer. Immediate relief followed operation, and he went to his work in Chicago in a few weeks. He is now in good condition and eats whatever he desires.

(15) Miss K. For three years had stomach trouble, at first had occasional attacks of indigestion, later the attacks grew more frequent and much worse until within the last year has had to take a very careful diet. Treatment gave only temporary benefit. There was no hemorrhage from stomach. Starves herself rather than eat and be distressed. Stomach dilatation not extreme. Operated October 14, 1905. Found a gastric ulcer scar, with indurated

edges in anterior wall of stomach about an inch and a half from the pylorus. Recovery rapid and final results good. Eats anything desired and digests it. No residual stomach contents and no indigestion since operation a year ago.

(11) Miss S., aged thirty-eight years. Nurse. For five years has suffered from indigestion, which was so severe as to render her unfit for her work. Six months before operation began to rapidly grow worse. Scarcely any food could be taken without it causing great distress. Lost weight rapidly, seven pounds in seven weeks. Would vomit food soon after it was taken into the stomach. Had been constipated for years. Had not menstruated for two years before operation. Examination showed marked emaciation. Stomach was dilated, extending at least two inches below the umbilicus. No nodules could be felt at pylorus. No hematemesis. Operated May 4, 1905. Found stomach very much dilated, caused by stenosis of the pylorus, due to a scar of a chronic indurated ulcer just within the stomach and on the upper and posterior wall. Did a gastro-enterostomy, using a short loop, suture method. Patient reacted readily from the operation, and at first took liquids moderately well, but very soon began to vomit bile, which Fowler's position and medication failed to relieve. This kept up more or less for six weeks. Symptoms became alarming and it was decided that an entero-anastomosis would be necessary. Second operation was performed June 13th, 1905. An entero-anastomosis was made about  $2\frac{1}{2}$  inches below the gastro-enterostomy with suture, and the unused loop of intestine on the duodenal side was closed by folding the bowel in on itself, thus giving the bile a direct course into the intestine. No adhesions were found as a result of the previous operation, and there was no trace to be seen of the linen sutures which

had been used in the operation forty days previous. This second operation gave complete relief. Patient increased thirty pounds in weight in a short time, has been able to eat with impunity almost anything desired, and is now (sixteen months after last operation) in good health. No vomiting of meals. No constipation and menstruates regularly since four months after operation.

(6) Mrs. C., aged forty-one years. At various times covering a period of twelve years has been troubled with indigestion. Has had occasional spells of severe pain in the epigastrium. Has been treated more or less for stomach and liver trouble at various times, the leading symptoms being gaseous disturbance and inability to digest food. Stomach was dilated extending to the umbilicus, and patient complained of much distress beginning soon after meals. Occasionally vomited meals. Absence of hydrochloric and presence of lactic acid. Operated February 25, 1905, doing a posterior gastro-enterostomy and entero-anastomosis. Found a chronic ulcer about the size of an almond, with indurated edges occupying the anterior and lower wall of the pylorus. Patient recovered from the operation and within a few hours began to take and retain water. The next day could retain liquid food, gained flesh rapidly, and has had no trouble whatever with the stomach, being able to eat and digest anything she wishes. Was much emaciated at time of operation, has gained twenty-five pounds since.

#### Discussion.

Dr. F. Gregory Connell: In regard to the case reported by Dr. Lyman, I have had no experience with a case of that kind.

With reference to the paper read by Dr. Perkins, in an effort to provoke discussion, I should like to mention two recent cases of gastric ulcer in which gastroenterostomy was not performed. In the first one a laparotomy disclosed a large callused ulcer at the cardiac

end of the lesser curvature. There was absolutely no obstruction of the pylorus, and consequently this ulcer was excised by means of a large wedge-shaped incision, or double V-shaped incision, toward the lesser curvature, and the apex of it extended toward the greater curvature. The large gap was closed by sutures.

The second patient was fifty years of age. Laparotomy disclosed a hard indurated ulcer at the pylorus, completely obstructing the pylorus. There was some slight granular involvement. In this case the entire ulcer-bearing area of the stomach was removed, the stomach and duodenum closed, and a posterior gastrojejunostomy performed with no loop, and no twist. The patient had a duodenal fistula for a couple of weeks, which closed spontaneously.

In the first case I did not do a gastro-enterostomy because there was no obstruction of the pylorus. The ulcer was situated in that part of the stomach where it would cause the least possible irritation from food, and I did not see that a gastro-enterostomy would give any permanent relief from that ulcer.

In the second case gastro-enterostomy was clearly indicated, because there was obstruction of the pylorus, and because of the age of the man, the extreme hardness of the obstruction, the slight granular involvement, and because of the fact that thirty per cent. of these cases are preceded by a history of ulcer which not infrequently indicates carcinomatous degeneration and the performance of a more radical operation. Every case of ulcer of the stomach must be looked upon potentially as carcinoma, and the best way to cure carcinoma is to remove it before it has become carcinoma, or as soon as possible after it has undergone malignant degeneration. The only way to make an early diagnosis in these cases is by a painstaking microscopical examination.

The advantages of gastro-enterostomy have been very forcibly pointed out by Dr. Perkins; but that it is not a perfectly satisfactory operation is well shown by the fact that Mayo, in 600 cases of gastric and duodenal ulcers, operated by gastro-enterostomy only 383 times. Perhaps the chief disadvantage of gastro-enterostomy is that it is insufficient, because when you operate by gastro-enterostomy for gastric hemorrhage subsequently the patient may die from bleeding of the ulcer. It is insufficient when you do this operation for perforation of an ulcer or an ulcer without per-

foration, for the reason that cancer may develop at the site of the ulcer-bearing area, and you may have to operate again. When the operation is done in the face of evident carcinoma, it is only palliative. In many cases it becomes a dangerous operation, on account of the occurrence of peptic ulcer. Peptic ulcer of the jejunum is more frequent now than formerly. There are many circumstances arising frequently which make this an insufficient operation, and while it may be the only operation which can be done within reason, its limitations should be clearly defined. It is merely palliative, and if there is no interference with the normal evacuation of the stomach it is not indicated. Drainage may cure some cases of ulcer, but in others it will leave them no better. Drainage will not cure carcinoma. In many of these cases of gastro-enterostomy partial gastrectomy would be performed were it not for the higher mortality. The mortality of gastro-enterostomy is very low, two and a half per cent. Mayo reports 153 cases of gastro-enterostomy, with one death. Partial gastrectomy has an immediate mortality rate much higher; but owing to improved technique the mortality has been decreased from 25 to 12 or 10 per cent. For instance, Mayo, in his 40 partial gastrectomies, had a mortality rate of 5 per cent. It would seem, however, that the indications for gastro-enterostomy are becoming gradually lessened, and those of partial gastrectomy are becoming accepted.

Dr. D. P. Mayhew: I have listened to Dr. Perkins' paper with a great deal of interest. He has pointed out in a very interesting way the fact that the attention of the surgeon has been and is being directed more and more of late to the upper right quadrant of the abdomen. There is a group of conditions in that part of the belly well worthy of his attention. In cases of gastric ulcer, with its attendant circumstances and conditions, such as obstruction of the pylorus and interference with the normal evacuations of the stomach, gastro-enterostomy has been the operation of choice, and in the last four or five years the mortality has been considerably improved, so that Mayo, as Dr. Connell has said, in his last 150 operative cases, has had but one death. In his last 56 cases, reported in April, there was no death. The statistics of former years are not to be considered in this matter. The statistics of 1900 indicated a much higher mortality than that from operations performed at the present time. The general mortality in

the last year or so in the best hands has not been over 1 per cent.

Personally, I have not had enough experience in this work to have come to any definite choice of operation, but it seems at present that gastro-enterostomy by suture is the method to be preferred, and that is the operation I shall do in the future.

It is not only in cases of gastric ulcer with or without hemorrhage that this operation is indicated, but, as Dr. Perkins has pointed out, there are many cases with dyspeptic symptoms, due to some obstruction of the pylorus, that are markedly relieved by this operation. And while the indications for partial gastrectomy in cases of gastric ulcer may be increased in the future, as has been pointed out by Dr. Connell, and those of gastro-enterostomy diminished, still there is a large field for gastro-enterostomy in relieving dyspeptic symptoms, caused by partial obstruction of the pylorus, and consequent dilatation.

Dr. S. D. Van Meter: Gastro-enterostomy is a subject which has aroused both the medical and surgical members of the profession in the past five years, and in a five minutes' discussion it would be difficult to cover the field.

Although my experience has been very limited, I have come to the conclusion that the surgeon cannot bring too much caution to bear in selecting his cases for operation if we would expect to place the operation where it belongs. As Dr. Connell has said, it is not the operation of choice. However, it is done in many cases, I am sorry to say, by the surgeon because it is possible, and many times simply because the operator wanted to do, or said he was going to do, a gastro-enterostomy. To this point I would say no man should decide what operation he should perform on the stomach until he sees and examines the stomach. Dr. Connell has told us that gastro-enterostomy is an insufficient operation, and even when it is done for hemorrhage the patient may die from it. I would like to call attention to a fact, that when we operate for gastric ulcer and consequent hemorrhage we do not always find the ulcer, and even when the ulcer is found we are not sure it is the only one, and while not certain in result it offers the greatest chances, and consequently is justifiable. Then gastroenterostomy has its justification for any condition where it will bring about relief by drainage, as of obstructive cancer of the pylorus.

As to the kind of operation, I think the consensus of opinion is favorably inclined to the



posterior operation through the transverse meso-colon in line with the natural left-sided position of the jejunum. However, in my limited experience the anterior operation in one case was eminently satisfactory. In another it was insufficient. From observation in this case I was thoroughly convinced that the greatest factor in so-called vicious circles is angulation at the point of anastomosis. In the case of anterior gastro-enterostomy in which the result was satisfactory, the patient is still living, the operation having been done four years ago, and she has gained weight forty pounds. In this case I stitched the jejunum along the meso-colon to prevent angulation at the point of anastomosis.

In the other case, which was unsatisfactory in its outcome, I had the pleasure of re-operating a year later. Prior to the first operation the man had declined in weight from 190 pounds to 85 pounds from repeated hemorrhages. I did the anterior operation, not because I thought it the operation of choice, but because it was, in my opinion, the only operation he could stand. It stopped the hemorrhage, but he had repeated attacks of bilious vomiting, and one year later I did the posterior operation, undergoing the anterior anastomosis and at the same time removing the appendix with good results.

I would like to call attention to the value of the Roosevelt clamp which, I believe, after overcoming one or two points in application, will serve any operator sufficiently well in the majority of cases to cause him to use it in these operations. It is nothing more or less than a double clamp made on a central bar. It has the advantage, when the two loops are brought in apposition, of holding them there without the aid of an assistant.

In conclusion permit me to express the hope that the operation of gastro-enterostomy which, in many cases, is attended with good results, shall be held down to the place where it belongs by the surgical members of the profession, so that no discredit may be brought on the operation which in many cases will cure where nitrate of silver has failed.

Dr. Leonard Freeman: I am very glad Dr. Perkins has brought up this subject in so excellent a manner, because there are so many people who have bad stomachs all their lives which might be corrected by operation. It is certainly a proper thing for us to discuss any subject which may tend to relieve them in any way.

My own experience is limited to forty-seven

cases. In these I have tried perhaps nearly all of the different methods of gastro-enterostomy, starting with the Murphy button. I have done the anterior operation a number of times; the posterior operation a majority of times. I have used the McGraw ligature. I have done the posterior operation by the short loop and by the long loop, and with intestinal anastomosis. It seems to me the Moynihan operation, the one practiced by the Mayos at the present time, is not only the easiest of all posterior operations, but gives the most satisfactory results. The McGraw ligature, to be sure, is easier in some respects; but, at the same time, the ligature does not cut through for an indefinite length of time, perhaps twenty-four hours, perhaps not until seventy-two hours, and during that time there may be considerable disturbance about the patient's stomach.

I would like to suggest in such a case as Dr. Lyman reported, where the intestine was very small and delicate, and such an operation as the McGraw ligature would be a satisfactory one, providing the patient was not too far reduced to wait for a short time for the ligature to cut through. In such tender tissues it would cut through rapidly.

In the after treatment of the case, it seems to me, a very proper thing to put the patient in a sitting position. Dr. Perkins laid some stress on that. I should like to ask him why he places the patient in a sitting position, and whether he has any theory about its effect?

Dr. Perkins: They get through quicker. The stomach will empty itself in a short time.

Dr. Freeman: That is the point I wanted brought out. They empty their stomachs quicker. At the same time, the investigations made at Harvard University in the laboratory seem to throw doubt upon the question. By feeding dogs certain foods mixed with sub-nitrate of bismuth, they have been able by the X-ray to study the way in which food is handled by the stomach, and the way in which the stomach empties itself. It has been shown by these experiments that the stomach does not empty itself by gravity; in many instances they have been able to discover that it is entirely a matter of muscular action. When a large hole is made in the bottom of the stomach, and the pylorus is open, the stomach will empty itself through the pylorus, and not through the hole. When the pylorus is closed, food goes through the hole in the bottom of the stomach. It has been shown also that the

position of the animal seems to have nothing to do with the rapidity with which the stomach empties itself. When the stomach gets ready, the food goes through the opening just as rapidly when the animal is in a reclining position as in any other. There is, doubtless, an advantage in the sitting position, nevertheless, and the straighter up you get a patient, the more advantage there is. To elevate the head of the bed at an angle of 30 or 40 degrees, however, does not elevate the stomach very much above the pelvis. If you wish to get the full benefit of the procedure, the patient should be in a sitting position. You would have to put the bed up almost vertically to get the same elevating effect on the stomach as you do by placing the patient in a sitting position.

I thoroughly agree with Dr. Connell that there are a great many limitations to the operation of gastro-enterostomy. I believe the choice of operative cases should be made with the greatest care, and in that respect I think Dr. Perkins has struck the keynote of the whole thing—that the internist should work with the surgeon, and no surgeon, unless he is an expert in these cases, should attempt to decide by himself which cases should be operated on, and which cases should not be operated on. There is great difference of opinion among medical men and among surgeons as to whether gastro-enterostomy is of much service or not in ulceration of the stomach. If we can cut the ulcer out easily, and without adding very much to the dangers of the operation, I believe with Dr. Connell that this should be done; but, if we cannot do this, I think gastro-enterostomy is indicated. Mr. Moynihan lays great stress upon gastro-enterostomy for ulcer of the stomach. He told me personally that he believed such operations to be of much service. My own experience has not borne this out. I have operated on several cases of ulcer of the stomach by gastro-enterostomy, and in one case the patient died afterward of hemorrhage from the stomach. In another case I excised a perforating-ulcer of the stomach in an old man. At the end of a year and a half he had another severe hemorrhage from the stomach, showing that another ulcer had formed.

Dr. Connell speaks of the large opening in the stomach produced by removing the ulcer, and the difficulty of handling it. This can be overcome by pulling the stomach through a gastro-enterostomy clamp and clamping it off, cutting off the fold of stomach on top of the

clamp. The parts are then sewed together by through and through sutures, followed by Lembert sutures on the outside.

I feel that the problem of the future is not so much to devise new methods of operating upon the stomach as it is to find out which cases should be operated upon, as Dr. Van Meter emphasized so strongly.

I should like to know what was the character of the dyspepsia Dr. Perkins mentioned; what the symptoms were, and what he means when he speaks of operating for dyspepsia. Dyspepsia is an extremely indefinite term, and unless more clearly defined, it carries no meaning with it. Dyspepsia may be due to an ulcer which we cannot find. It may be due to a lack of motive power of the stomach; to spasmodic contraction of the pylorus, to hyperchlorhydria, or to many other causes. I should be glad to have him make this point clear.

Dr. Frank N. Cochems: My experience with gastro-enterostomy has not been extensive. I removed what I supposed was an ulcer from the upper portion of the stomach at one time; the patient had a recurrence in a year, and died of carcinoma. I have done several posterior gastro-enterostomies for carcinoma and for gastric ulcer.

Speaking of gastro-enterostomy, I expect when we refer to the work of the Mayos we are speaking of men who are doing more than any other in the world. It was my pleasure to watch them for a number of days this summer, and one remark they made was interesting. Will Mayo made this remark several times, namely, 69 per cent of the ulcers are not in the stomach at all, but in the duodenum. That was news to me, as well as news to nearly every one that was present except the Mayos.

They also made some statements that have not been brought out with regard to the indications for operation. They would not operate on ulcer of the duodenum, if the pylorus was not strictured. There is apt to me some constriction of the pyloric end of the stomach, or they would not operate. In a number of cases I saw them expose the stomach, demonstrate the ulcer to the visiting surgeons, and seemingly the ulcer would be apparently easy of removal. I wondered why they did not remove the ulcer, and asked them why they did not do so, and the answer they gave the visiting surgeons was that the danger was greater, and they cured the ulcer as well as the posterior gastro-enterostomy of Monihan, which

they followed with their own modifications, as by its removal.

A surgeons' club has been organized in Rochester for the discussion of this and other surgical subjects that may come up. I asked Will Mayo what they would do with ulcers of the duodenum, with no obstruction of the pylorus? The answer was simply an evasion of the question. He did not seem to have any conclusion what to do. To remove that portion of the duodenum and pylorus was an extensive operation to which they did not care to subject their patient. That seemed to be the idea all the way through. They did gastro-enterostomies, rarely any resections, because, as Will Mayo said: "We do the posterior gastro-enterostomies now with as little danger as an appendix operation." They always use the Roosevelt clamp, and the Monihan suture method. They did a number of operations of this kind or type while I was there. I saw Dr. Murphy do a posterior gastro-enterostomy with a sort of angular square button, and asked him whether he used it often, and he replied, "yes," while other surgeons are resorting to the suture method, and it was surprising to me to see Murphy continue to use his button method in this work.

Dr. William B. Craig: I feel a sense of congratulation at the corroboration of my views by Dr. Connell, as stated in the little bulletin of the U. C. a few years ago by me, that the operation of the future, as indicated in that little paper, is in the line of being more radical, as I pointed out yesterday afternoon, namely, excision of the ulcer, or partial gastrectomy. Gastro-enterostomy appeals to me as a mutilating operation. It is of value in a limited number of cases, but is still to be held in sub judice. I am afraid the operation has become more popular than later experience will prove has been warranted.

The remarks made by Dr. Perkins with reference to emptying the stomach are borne out by experiments on animals. It is not so much gravity that empties the stomach as it is motility. If the pylorus is closed tight fluids will be ejected. If it is only partially closed, not all the contents of the stomach will pass that artificial route.

With reference to a vicious circle, we are as yet unable to cope with that fully. We cannot devise a method at the time of operation. If you attach the intestine any length you please, at the limitation of your fixation you have angulation or stricture. Extreme adhesions account largely for the interference

with the stomach and the regurgitation of bile into the stomach. The method of making a larger opening at the pyloric end of the stomach, at the junction of the duodenum with the stomach, an operation with which you are all familiar, but I have forgotten the author's name, does not appeal to me because of the fact I tried to emphasize with regard to the size of the opening in posterior gastro-enterostomy. It makes a large opening and permits almost immediate direct entrance of bile into the cavity of the stomach. These are matters that are determined fully by experience and by time.

A word or two with regard to the mortality of gastro-enterostomy. It is much higher in the hands of the general surgeon than it is in the hands of Mayo; hence the cases for this operation should be selected with great care, and the operation done with the knowledge and consent of the patient as to the complications, and to the fact possibly of an incurable condition being established. It should be pointed out distinctly that little or no benefit may result from the operation. On the other hand, neurotics should not be operated on unless they have active and abnormal stomach conditions.

Dr. Perkins (closing the discussion): Dr. Connell spoke of excising the ulcer, and also of doing a pylorectomy. Of course, this is the ideal thing to do in case one is certain that there is only one ulcer, or that he has found them all, and in case the patient is in good condition. In many of my cases if I had undertaken to excise the ulcer I would have narrowed the pylorus more than it was already narrowed by the ulcer itself; then it would have been necessary to do a gastro-enterostomy as well. In some of these I might have done pylorectomy, but I felt that the chances were better for the patient, in view of the conditions present, to do a more simple operation.

We all know that in any part of the body drainage is the greatest help the surgeon has. If you have an ulcerating part, or an abscess in any portion of the body, and you drain it well, you are apt to get good results. There will be continually more excision of ulcers and more pylorectomies done in cases where we would now do gastro-enterostomy. But I think these cases should be carefully selected, and the surgeon should be sure of his ground and sure he is not adding to the patient's risk rather than taking from it by the operation. I agree with Dr. Van Meter perfectly, that care



should be taken not only in cases that need operation, but that the operation should not be abused.

With regard to the McGraw ligature, the opening which that produces is of a puckered nature, and we have to depend upon a slough, the extent of which we cannot determine, neither do we know the size of the opening we will get; also it has the objection of leaving a considerable amount of scar tissue at best. The same objection holds good with regard to the Murphy button and the triangular suture. This is a serious objection, as we know that cancer is more apt to appear in scar tissue than in normal tissue. I neglected to say that in making an opening I make it two and one-half inches in length; dissect back the peritoneum, and cut out a strip at least half an inch wide, which gives an ovoid opening half by two and a half inches. I spoke of the sitting position. This is maintained by elevating the head of the bed so as to produce an angle of say thirty degrees, and the patient is kept in bed and kept from sliding down by means of a swing. This swing is made by taking a piece of inch board two and a half inches wide and two and a half feet long. A small hole is placed in the board near either end and a rope is put through the hole and a knot tied on the under side. These ropes are then carried up and tied to the head of the bed. Pillows are put on this swing and the patient is allowed to sit comfortably with pillows placed on his back. This props him up in a position that can be maintained indefinitely without discomfort. If you have regurgitant, or anesthetic, vomiting in a patient, put him in that position, do nothing further, and see if you do not get sufficient drainage of the stomach to cause cessation of the vomiting. Whether the drainage we get goes through the bottom of the stomach or through the pylorus, matters not. We certainly get the stomach relieved by the elevated position. (Here Dr. Perkins demonstrated the method and technique he employs.)

In regard to dyspeptics, Dr. Freeman misunderstood what I said, if he understood me to say that I did gastro-enterostomy for simple dyspepsia. The statement I made was with reference to the classification of these cases. I classified them something like this: Those with cancer; those with gall stones or symptoms of gall stones; that is, those in which the symptoms would lead one to expect gall stones, but on operation gall stones or

gall bladder disease were not found, but in which the whole trouble appeared to be due to an ulcer, which caused the characteristic pains. Then I classified and mentioned a type of cases in which there was gastric ulcer, but with neurotic symptoms present. There is another class not especially neurotic, with no symptoms of gall stones or of cancer, but they have chronic gastric ulcer. These we formerly classed as dyspeptics.

I had one vicious circle, and that was in a case in which I did not make the anastomosis near enough to where the bowel enters the peritoneal cavity, and six weeks later I did an entero-anastomosis and had a complete recovery.

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The *Journal of the Michigan State Medical Society* states: "There are about 250,000 doctors in the world. Half of them are in the United States. In England there are seventy-eight and in France fifty-one to the 100,000, but in this country there are about 175, or one to every 620 people. In London there are 128, in Paris 111, in New York City seventy-four, and in Constantinople thirty-five per 100,000 inhabitants."

In Denver there are, according to the A. M. A. Directory, 633 doctors. The census gives a population of 133,859. There is then one to every 211 people. Per 100,000 Denver has 474 doctors. However, Denver always did excel.

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A. V. Banes treats vulvo-vaginal abscesses which will not submit to incision by cocaninizing the mucous membrane and drawing off pus with a large-sized hypodermic needle and about a dram of 10 per cent. phenol is injected and left. He has never had a recurrence.—*Medical Summary*.

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Gradually increasing hoarseness in people past middle age, without definite cause and with a history of pain radiating to the ear, is suggestive of malignancy.—*American Journal of Surgery*.

# Progress of Medicine

## INTERNAL MEDICINE.

EDITED BY

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William J. Baird, M. D.,

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### SALICYLISM AND EPISTAXIS.

E. Leach (*Brit. Med. Journ.*, April 20, '07) discusses the reports of the relationship of influenza and epistaxis and concludes that not the influenza, but the salicylates given for its treatment is responsible for the bleeding. He says it is a not uncommon symptom of salicylism and may be due to the impurities in the drug. He quotes some rather convincing instances, as in each case the bleeding stopped soon after the salicylates were stopped.

O. M. G.

### MENIERE'S DISEASE.

T. Wilson Parry (*Brit. Med. Journ.*, May 11, 1907), attempts to establish a diagnosis between "Meniere's disease proper and "Meniere's symptoms." He believes the former to be always of primary labyrinthine origin and due to sudden hemorrhage or exudation into the labyrinth, while the latter is of ultra-labyrinthine origin, generally tympanic and may produce a hyperemia of the labyrinth.

The former occurs in subjects with normal auditory apparatus, is of sudden onset, and there is auditory deafness. The latter occurs in patients with the auditory apparatus previously affected, gradual in its onset, deafness is not essential, and, if present, is not of nerve origin primarily, while vertigo, tinnitus and vomiting are common to both.

In the latter he has used a seton over the mastoid for from four to six months with very gratifying results—probably by relieving the hyperemia of the labyrinth.

### HEART BLOCK (ADAMS-STOKES SYNDROME.)

While this disease has been fairly well

known among the leading clinicians since Adams' description of it eighty years ago, it has only recently gained the general recognition which it deserves.

The characteristic symptoms once understood are not easily overlooked: Slow arterial pulse, 30, 20 or less per minute, brief syncopal apoplectiform or epileptiform attacks, pulsation of the veins of the neck—2, 3 or 4 to the arterial pulsations—the former representing the auricular and the latter the ventricular pulse.

It is now fairly certain that the condition is due to something which interrupts the normal impulse from the auricle to the ventricle, and this difficulty resides—in the majority of cases, at least—in the bundle of His.

Butler (*American Journ. Med. Science*, May, '07), reports the case of a man of forty-three years, who had been known to have a very slow pulse since typhoid fever twenty years previous. Ten days before his death he was seized with fever and pain in the large joints, and the pulse was found to be 28. There were subsequent convulsive seizures, which continued till near death, and the pulse ran from 14 to 20 between attacks.

The seizures began with marked pallor, the pulse dropping to 6 or less, the eyes rolled up and to the right, pupils dilated, head turned in same direction, lips were cyanosed, and there were slight convulsive movements. The unconsciousness varied from partial to complete, but was of brief duration. The end of the seizure was preceded by a strengthening and hastening of the pulse and flushed face. There was sometimes vomiting before attacks. The patient finally passed quietly away.

The venous pulsations were plainly visible in the neck and were from 80-130, and bore no definite ratio to the arterial pulse. A faint fluttering could be heard at the third interspace to the left of the

sternum, and was synchronous with the pulsation in the neck.

Autopsy showed hypertrophy and dilation of all the chambers of the heart except the right ventricle, which was only hypertrophied, moderate mitral insufficiency, thickening at the base of the mitral cusps, increased fat in visceral pericardium at junction of right auricle and ventricle and along coronary arteries, fatty infiltration and degeneration of walls of right ventricle, less so of left, and no changes in coronary arteries.

The bundle of His had undergone fatty infiltration to such an extent that it was not more than one-fifth its normal size.

O. M. G.

#### ARTERIOSCLEROSIS AND ITS TREATMENT.

Arteriosclerosis Senator (*Die Therapie der Gegenwart*, March '07), is an inflammatory, degenerative, necrobiotic process, beginning according to the vessels involved in the intima or media and extending to the other coats of the arteries. The deposit of lime salts is a result not the cause of the disease, and the recent suggestion that they be withdrawn from the food would more likely prove hurtful than helpful. The increased blood pressure is not the cause of the arterial changes; arteriosclerosis (senile form) is a wearing out of the arteries ("Abnutzungs Krankheit"), but may be caused by syphilis, alcohol, tobacco, mercury, lead and, perhaps, carbon, sulphide, prolonged excessive use of coffee or tea, meat extractives, gout, diabetes mellitus and nephritis, and excessive proteid consumption may predispose to the disease; the excessive nitrogenous diet leading to increased intestinal fermentation, chronic intoxication (so-called auto-intoxication), and arterial disease. As additional predisposing causes may be mentioned sedentary life, constipation, and the consequent sluggish circulation. In treatment, the first step

should be the withdrawal or limitation of alcohol and tobacco, but in senile arteriosclerosis these and other changes should be made tentatively. The diet must be regulated, proteids and meat extractives limited, no meat, or only white meat, and fresh fish, milk, fruit, fats, bread, green vegetables, eggs in limited quantity, but in fat patients the carbohydrates should be withdrawn and green vegetables substituted and some lean meat allowed, constipation should be corrected and exercise active and passive prescribed, but with due regard for the heart. If the arteriosclerotic is also a diabetic, attention should first be given to limiting the sugar output, allowing abundant vegetable diet, acid fruits, salads and much fat. The milk and vegetable diet diminishes the viscosity of the blood, thus facilitating its flow and diminishing the work of the heart and arteries, the same may be said of the iodine preparations, and in addition that perhaps they act directly on the intima. Iodipin may be given in capsule, 1.00 three or four times a day, sajodin 0.5 five times daily, or potass. iodide (or sodium) 1.00-2.00, aquae ad 200.00, one teaspoonful three times daily, taken in milk; tinct. iodine, 1.00; spts, aether nitros., 30.00; three to four times daily, 20 to 30 drops. Nitroglycerin, 0.1; spts. aetheris nitrosi, 30.00; three to four times daily, 15 to 20 drops. Hydrotherapy, but if the arterial changes are extensive, and especially if the heart is involved, with great caution; active and passive exercise should be carefully graduated. Recently the so-called blood salts have been recommended, antisclerosin tablets (composed of sodium chloride, sulphate, phosphate, carbonate, magnesium phosphate, and calcium glycerophosphate) at first two a day, gradually increased to six. Symptomatic treatment. Referat in *Wien. Klin. Woch.* No. 14, 1907.

W. J. B.



## NERVOUS AND MENTAL DISEASES.

EDITED BY

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## DEMENTIA PRAECOX.

Adolf Meyer (*Journ. Nervous and Mental Dis.*, May, 1907) in a paper recently read before the New York Neurological Society, concludes that our conceptions as to the dementia praecox group would assume more correct form if these were based on such analysis as would discover early disturbance of correct habits of thinking on the part of the patient. Only thus, too, will the clinician be able to grasp the opportunity to act for the patient's good. While Kraepelin seemed to despair of such an explanation and created a disease entity on the ground of final symptoms, such as negativism, mannerisms, stereotypies and disorders of volition, he missed many factors which furnish a more intelligible insight of the condition. In the antecedent conditions of dementia praecox, one invariably finds where sufficient facts are known, that the individual had abnormal ways of dealing with the situations of life, an inability to get square with events and a tendency to false adjustments. At first, perhaps, there is mere shirking of and slurring over of difficulties and secretiveness, a habit of excusing carelessness and lack of determination in meeting difficulties; instead, hypochondriacal complaints, and fault-finding of others, or the habit of passing over difficulties by imaginative thoughts, resort to mere praying or other expedients to help over individual disappointments. More serious reactions are blind tantrums, hysteroid outbreaks, mechanisms of partial suppression, with under currents of uncorrected false, lingering attitudes to life conduct. Etiologically the constitutional make-up counts for a great deal, but not in the vague sense of mere heredity and degeneracy. Much more is

to be learned from the study of deterioration of habits and undermining of instincts and their somatic components. The delicate balance of mental adjustment and of its material substratum must largely depend on a maintenance of sound instinct and reaction type.

[Dr. Meyer's philosophic essay is suggestive in much. He would have the clinician study the conditions which may develop into those of the dementia praecox group, not in the light of final results and in a spirit of fatalism but at the time, and from the viewpoint of mental reactions beginning to depart from normal instinct. Because the author believes that at this period there is often opportunity to return to the latter, his remarks are comfortingly optimistic. He does not deny the fact that mental health may at times be deranged by abnormal physiological function, yet Meyer believes that mind "can demoralize and undermine itself, its organ and the entire biological economy," and he infers that this condition obtains in dementia praecox. The writer desires merely to point out a clinical fact which raises a doubt in his mind as to the existence of pure mental degeneration in these cases, unassociated with other casual factor.

Characteristic of many anamneses of dementia praecox, is the fact that often these patients were at one time exceptionally studious and very ambitious. I do not now refer to the frequent habit encountered of their reading scientific literature they cannot digest, or the accompanying misdirected ambition that is without any beneficent results. Reference is made to that earlier time in some histories (of course not all) when by school record, the work of these patients is shown to have been adequately successful. Associated always is a sensitive and searching self-criticism, yet the mental processes were certainly not abnormal.

Under these circumstances, then, how can we regard the beginning "habit of excusing carelessness or passing over difficulties by imaginative thought," *the primary and self-contained mental change*, an example of "the mind undermining its organ," and not the reverse condition? Whether or not we believe an unproved pathological physiology to be the causal factor, it seems necessary to assume in this character change an etiological element of some sort, beyond idiopathic mental deterioration.—Dept. Ed.]

SYMPTOMS SIMULATING BRAIN TUMOR DUE  
TO OBLITERATION OF VENOUS  
SINUSES.

C. E. Riggs (*Journ. Ment. and Nerv. Dis.*, April, 1907) reports upon this condition. The patient, aged twenty-two years, a teacher of neuropathic family history, was well until the present illness. Two years before first observation she was thrown out of a carriage, striking upon the top of her head. Immediately thereafter vomiting and headache, then no symptoms for nineteen months, when severe headaches in right frontal region supervened. The headache was at first periodic, usually occurring each afternoon with an occasional interval of several days. When the pain was especially severe, vomiting occurred. She suffered more severely during the day. Vision was impaired and before death was almost entirely lost. Choked discs present. Right knee jerk exaggerated, left normal; no ankle clonus, superficial reflexes normal; no Babinski; stereognostic sense normal; dynamometer, right hand 19, left 16; no inco-ordination; pupils dilated, but react to light and accommodation; no sensory or vasomotor disturbances; temperature normal; pulse 70; no leucocytosis; urine normal; intelligence unimpaired.

One month after coming under observation, a twitching confined to the right sternocleido-mastoid and platysma myoides muscles was noted. Sometimes these muscles on both sides were affected simultaneously, but the right side was involved oftener and more markedly. Occasionally a tremor on right side of chin could be noticed. Along with one severe headache there was twitching of the face and eyelid of the right side. These twitchings did not appear to be characteristic of cortical epilepsy. An exploratory operation resulted in negative findings, but for several weeks thereafter the patient was free from pain. The latter returned with terrible intensity and during a second attempt at operative relief, death occurred. On post-mortem examination no intracranial growth was found. The brain and cerebellum presented a perfectly healthy appearance, but the longitudinal and two lateral sinuses were almost completely obliterated. The adhesions between the sinus walls were old and inseparable. Here and there in the course of the longitudinal sinus was found an open space which marked the entrance of a vein; the torcular Herophili was also obliterated. In some of the obliterated areas of the longitudinal sinus were adherent shreds of a brownish color which macroscopically looked like blood clots. The usual etiological causes of adhesive thrombosis, such as phthisis, cardiac weakness, exhausting diarrhea, infectious disease, middle ear disturbance, etc., were not factors in this case. Characteristic symptoms, such as epistaxis, delirium, somnolence, frontal edema, distension of frontal or parietal veins, convulsions, increase of temperature, etc., were also absent, and the actual condition was therefore not suspected during life.

## OPHTHALMOLOGY.

EDITED BY

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## EXOPHTHALMIC GOITRE.

Professor Kocher, of Berne, in an address delivered before the Medical Society of London (*Brit. Med. Journ.* June 2, 1906), discusses the pathology of the thyroid gland.

Kocher has never seen a case of exophthalmic goiter without an alteration of the thyroid gland. There is always some swelling of the gland and the vascular phenomena, consisting of dilatation of the vessels, and of the arteries especially, with a characteristic bruit, often combined with thrill on patting the finger slightly on the artery, are to be observed very early.

It is only in later periods of the disease, and especially after treatment, that the vascular symptoms may disappear, and then we have only the swelling characterized by the uniform diffuse increase of all parts of the gland and by its coarse granular surface. At this period the gland is much harder than normal, whilst in the beginning the great development of vessels makes the organ feel softer than usual.

In the first period of the disease, except in very acute cases, exophthalmos may be entirely absent and come on later. It is true that even in these cases the physician will be able to make out a series of ocular symptoms well known as Stellwag's, Graefe's and Moebius's signs, and especially a sign which Kocher considers one of the earliest symptoms of the disease in many cases, that is, a sudden retraction of the upper lid when the patient is made to look steadily at you or to look upward suddenly.

In admitting that exophthalmos is frequently absent at the beginning of the disease, and may be absent for a long period, Kocher believes the term exophthalmic goitre should be abandoned, as

there is a risk that the term may cause the medical practitioner to overlook the first symptoms of the disease, when treatment would have a most excellent effect.

There are other symptoms which are of greater importance than exophthalmos. In addition to the ocular symptoms already mentioned, tremor may be one of the most constant symptoms, combined with nervous agitation, the impossibility of keeping quiet, congestion of the lips, eyes and face, perspiration with every effort or every emotional influence, in hot rooms or in society. The eyelids may be red and swollen, yellow-brown pigmentation may be noticed at the lids and round the mouth. The patient may complain of headache, want of sleep, vomiting, diarrhoea, extreme physical susceptibility or depression, or may have undergone rapid emaciation.

There is one symptom besides the characteristic goitre which is never wanting—that is, the heart trouble in the form of tachycardia. The combination of heart trouble with goitre is so constant that the name of goitre heart has recently been introduced to collect together all affections of the heart which depend upon the formation of a goitre.

Buschan has tried to show in a monograph on Basedow's disease that the good results of operations are to be explained by the fact that the cases really benefitted by excision of goitre are not true cases of the disease, but that they are examples of those heart troubles in which the heart is affected indirectly by a goitre pressing mechanically on the great vessels or the cardiac nerves at the base of the neck, or on the windpipe, affecting the heart by producing some degree of suffocation.

We may see cases of large goitres, especially the more or less intrathoracic forms, presenting the symptoms of tachycardia and irregular heart action, with obstruction of the venous circulation so that



the eyelids swell and a certain degree of exophthalmos comes on. Buschan proposes the name of pseudo-Basedow for these cases, but it is better to say that they have nothing whatever to do with exophthalmic goitre in the proper sense of the word. They are an excellent illustration of the fact that the combination of goitre and exophthalmus is not the essential feature of the so-called exophthalmic goitre. It is, therefore, much better to give up the term altogether and use a more indifferent term until we have cleared up the theoretical cause of the disease.

Historically, there are as good reasons for giving the name of Grave's diseases to true exophthalmic goitre as the name of Basedow's disease. The latter term is the more common designation in medical literature.

Kocher classifies his cases under the three following forms:

I. *Vascular Goitre* (Struma Vasculosa) This variety consists of a very characteristic change in the thyroid body, which swells rather rapidly in the form of a more or less soft tumor with great dilatation of the vessels and systolic bruit and thrill. The general symptoms are much less pronounced than in a typical case of Basedow's disease. Tachycardia is always present, tremor as a rule, but exophthalmos is often wanting, and only some of the ocular symptoms (Stellwag's or Graefe's) indicate the beginning of the influence on the general system.

Here the chance of a favorable result from medical treatment by small doses of iodine, or, better, with phosphates, is particularly favorable, and the outlook for radical cure by operation is excellent.

Kocher has had fourteen of these cases under treatment; four have been treated internally; ten have been operated upon either by ligature or incision on one side, and all have been cured.

II. *Struma Gravesiana Colloides*. This

is a rather frequent form, and its characteristic feature is that an ordinary goitre exists before the development of the Basedow changes, which are, so to speak, grafted on the common form of colloid goitre. In these cases the symptoms are less severe even when all are present. If all be not present it is especially the exophthalmos which may be wanting. Tachycardia is always present, but the dilatation of the heart is less. There can be no doubt that we have to do with real Basedow's diseases in a mitigated form.

Kocher has seen seventy-two cases of this mitigated form of Basedow's diseases. Of these sixty have been operated upon without one death. Of seven cases there is no news to be had; two cases are better, and fifty-one cases have been cured.

III. *Typical Basedow's or Grave's Disease*. Of this form, Kocher has seen 140 cases and operated on 106 of them. There have been nine deaths; five cases have died later of different affections, partly without any relation to the disease; six have had tetany after the operation, without a death; seven cases are better than before the operation; nine cases are greatly improved; sixty-two cases are cured, and in thirty-four of these the cure is perfect.

The improvement following operation is in exact relation with the amount of hypertrophied thyroid removed or destroyed. If we ligate one artery we will get some, but only a slight amelioration of the symptoms. If we ligate two arteries the effect will be exactly so much greater. If we take away one lobe of the gland the effect is still greater. If we put a ligature on three of the four arteries, we may have a good result, and a still better if we excise one lobe and put a ligature on the superior thyroid artery of the other side. It will be even more complete when unilateral incision is combined with the resection of the upper and lower

half of the other lateral lobe. In view of these facts, one can scarcely come to the conclusion that we have to do with a neurosis which is cured by such a serious operation.

The absolute parallelism between the degree of diminution of morbid symptoms and the quantity of thyroid tissue removed seems to prove that the abnormally increased activity of the gland throws some poisonous substance into the circulation. We may state positively that over activity of the thyroid gland would for one reason or another be quite sufficient to explain the appearance of the symptoms of Grave's disease and their disappearance after operation. Undoubtedly the first change is in the nervous system in many cases. In others the disease dates from an acute infection. Prolonged or sudden nervous exhaustion is frequently the cause of the appearance of the first symptoms, and it is probable that a suddenly increased metabolism in the nervous tissue brings tonic substances through the circulation to the thyroid gland and gives rise to irritation and reaction, causing increased activity of its parenchyma.

In all severe cases of Basedow's disease there is much more reaction after operation than after excision of ordinary goitre. In Kocher's last 1,000 cases of excision of ordinary goitre he lost three patients; while in 175 operations for Basedow's disease he lost nine. In all the fatal cases besides the irritation of cardiac nerves, organic changes of the muscles of the heart, with more or less dilatation and irregularity of action existed. Owing to the manipulation of the gland during operation, there is a suddenly increased resecretion of thyroid secretion, producing excessive tachycardia, great agitation, profuse perspiration, trembling, diarrhoea and excessive weakness.

Operation in the early stages of Basedow's disease does not expose the life of

the patient to any danger. In very bad cases judicious medical treatment of the patients should be begun weeks before the operation. A judicious use of very small doses of iodine for a short time, the continuous use of sodium phosphate in doses of 2 or 10 grains a day, and absolute mental and bodily rest, are the most important features of the preliminary treatment.

Kocher often begins the operation by ligation of one superior thyroid artery, performs the second operation ten days or two weeks later, when the patient shows improvement, and undertakes the excision of one side only when, after some weeks more the symptoms of the disease show a decided diminution.

#### EAR, NOSE AND THROAT.

EDITED BY

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C. E. Cooper, M. D.,

Denver, Colorado.

#### THE EXAMINATION OF THE THROAT IN CHRONIC SYSTEMIC INFECTIONS.

J. L. Goodale devotes the paper to the question of the throat as an avenue of entrance for tuberculosis and the microorganisms of infectious arthritis.

It is not always an easy matter to determine in a given case, whether or not the throat is at fault and many times no gross pathological lesion can be seen. Under such conditions, reliance must be placed upon our knowledge of pathology and physiology and its intelligent application.

Relative to infectious arthritis, it is often difficult to tell whether an absorption of toxins or an actual penetration of bacteria is occurring. We are familiar, however, with the phenomena of an infectious arthritis disappearing after the removal of the septic focus. He believes that such conditions will engross the attention of laryngologists more and more as our knowledge of the present obscure etiology is advanced.

Insofar as cervical lymphadenitis is concerned, several cases are reported which show that cervical adenitis may exist in association with tubercle bacilli in the tonsils, even though visible changes are absent and is not necessarily affected by removal of the tonsils. Also, that a form of cervical adenitis occurs, accompanied by an enlargement and subacute and chronic inflammation of the tonsils, which disappears after their excision.

In the first instance penetration of the bacilli through the tonsil has occurred, and in the second there is an absorption of irritating material generated in the tonsil.

Theobald Smith has shown, in cattle, the penetration of tubercle bacilli through the mucous membrane of the mouth and throat without leaving any traces apparent to the naked eye.

How does such penetration occur? We know that dust and inanimate matter is continually passing through the lacunar epithelium, and observation shows that in case of the faucial tonsil micro-organisms are commonly found in the crypts, though seldom below the lining membrane. Whatever agency prevents their penetration through this membrane may, under some circumstances, be suspended. Micro-organisms would, therefore, follow similar paths taken by inanimate objects, namely, the lacunar epithelium. In addition, tonsillar crypts, as is well known, offer shelter to the bacteria from the stream of mouth fluids flowing past their orifices. Assuming such an hypothesis, bacterial infection through the throat would be favored by an increase in the size and number of intercellular spaces of the lacunar epithelium and by retention of the contents of the crypts. As an increase of the intercellular spaces is proportionate to the amount of emigration of lymphoid elements and such emigration is directly proportionate to any proliferation

present, we naturally find such enlarged spaces in hypertrophied conditions or tonsils undergoing rapid proliferation. Such is usually found in young or old subjects.

Atrophic conditions are associated with a close compact type of epithelium and theoretically act as a barrier against the penetration of foreign substances.

Narrow orifices of the crypts would favor bacterial activity, which will be shown clinically by cheesy masses within the crypts beneath the anterior pillar and in the supratonsillar fossa. Clinically the condition is manifested by evidences of toxic absorption, pallor, general impairment, fetid odor to breath and gastric disturbances.

Probably the two chief anatomic factors favoring infection are looseness of lacunar epithelium and retention of detritus, and hence they must be considered when expressing an opinion as to the throat as a portal of entrance for a given infection.

Non-tubercular adenitis from absorption of toxins would theoretically be accompanied by visible alterations as shown in some of the cases reported.

Meager data only exists in chronic infectious arthritis, but if due to a specific micro-organism it is possible that such is ubiquitous and that individual pre-disposition is a primary factor greater than any throat condition. Granted such pre-disposition, a local site of vulnerability would be of importance, and when other regions than the throat could be eliminated, we should look carefully to the tonsil. The examination of a number of cases of infectious arthritis has shown retention of lacunar detritus, with or without tonsillar hypertrophy.

The author advocates thorough extirpation of the tonsils when other points of attack than the tonsil can be eliminated.—*Annals of Otology, Rhinology and Laryngology*, March, 1907. C. E. C.



## Constituent Societies

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A stated meeting of the **Medical Society of the City and County of Denver** was held at the Academy of Medicine Building, May 7, 1907, Vice-President Stover calling the meeting to order at 8:25 p. m.

Dr. C. C. Fowler was reported upon favorably by the Board of Censors, and upon ballot was elected to membership in the society.

Dr. M. E. Preston read a paper on **The Treatment of Poisoning Cases in General Practice**. Dr. Preston exhibited various forms of syphons, stomach pumps, mouth gags, etc., which were of service and outlined the practical points to be borne in mind in the emergency treatment of poison cases. These points were illustrated by reference to 100 cases seen and treated by the Police Surgeon's office.

Dr. Preston's paper was discussed by Drs. Moleen, Hill, Simon, Collins and Lazell.

Dr. G. A. Moleen read a paper on **National Formulary Preparations versus Proprietaries**, in which he pointed out the advantage of prescribing the former, and exhibited numerous national formulary preparations which were imitated by proprietaries. Dr. Moleen's paper was discussed by Drs. Burns, Beggs, Levy, Simon, Lazell, Neuman and Van Meter.

On motion of the Society it was determined that Dr. Moleen's paper be printed in Colorado Medicine.

Dr. Levy, chairman of the committee appointed to consider the question of Medical Defense, reported as follows:

Denver, Colo., May 7, 1907.

Denver County Medical Society:

Your committee appointed to investigate and report on the matter of physicians' defense in malpractice suits begs to briefly submit the following:

First. We do not deem it wise, at this time, to organize a local company for this purpose.

Second. We recommend the form of insurance which covers indemnity as well as defense.

Third. In the judgment of this committee, a clause in the policy permitting the assured

at his option to select associate counsel at the expense of the company is desirable.

G. H. STOVER,

Chairman.

ROBERT LEVY,

I. B. PERKINS,

S. SIMON,

W. H. DAVIS,

O. M. SHERE,

Committee.

On motion, the report of the committee was accepted.

Dr. Beggs moved that the report be sent to the Journal of the American Medical Association. The motion was seconded and carried.

On motion, the consideration of the amendments to the Constitution and By-Laws was postponed to the next regular meeting, and was to be made a matter of urgent business.

The proposed amendments were then taken up for second reading.

On motion, the discussion of the advisability of inviting the American Medical Association to hold the 1908 convention in Denver was postponed to the next regular meeting, to be made the second order of business.

On motion, the chair appointed the following committee to confer with the officers of the Academy of Medicine in regard to a possible amalgamation of the two societies: Drs. Black, Burns, Levy, L. Freeman and Silverstein.

On motion, the society adjourned. Members present, 54.

A regular meeting of the **Medical Society of the City and County of Denver** was held at the Academy of Medicine Building May 21, 1907. President Bane called the meeting to order at 8:20 p. m.

The Board of Censors reported favorably on the application, by demit, of Dr. R. G. Walker, who, upon ballot, was elected to membership.

The application of Dr. R. V. Barta, proposed by Drs. Preston and Stover, was read and referred to the Board of Censors.

Under the first order of urgent business, Dr. Black, chairman of the committee appointed to confer with the officers of the Academy of Medicine, reported that the conference was held and that as a result of that conference it was deemed advisable that action on the proposed amendments to the Constitution and By-Laws be postponed until after a conference might be held with a committee appointed

by the Academy of Medicine. On motion, the report was adopted and the committee continued.

Under the second order of business, the consideration of the advisability of inviting the American Medical Association to hold the 1908 meeting in Denver, Dr. Jackson moved that the chair appoint a committee of seven to consider the question, and if deemed advisable, to bring the matter before our delegates to the A. M. A. previous to issuing such invitation to the A. M. A. The motion was carried.

Dr. Eleanor Lawney read a paper on the **Work of the Visiting Nurses' Association**, in which she showed the amount and character of the work done during the past year, the results of that work, the desirability of continuing the work, and the fact that, unless the necessary financial support was accorded the association, the work would have to be discontinued. Dr. Lawney's paper was discussed by Drs. Taussig, Spivak, Beggs and Hilkowitz, Dr. Taussig dwelling on the great value of the work in those cases of the tubercular poor, who were practically homeless. Dr. Spivak asked why the Fire and Police Board did not allow the erection of tents within the city limits, and moved that a committee of three be appointed to investigate the matter. The chair appointed Drs. Spivak, Lawney and Hilkowitz.

In closing, Dr. Lawney suggested that the members of the society canvass their friends for the necessary funds for the association. Dr. Libby moved that the committee appointed by the Charity Organization, Drs. Collins, Taussig and Sewall, be approved by this society, and that they shall represent this society in the matter of procuring the necessary funds. The motion was carried.

Dr. C. D. Spivak read his fifth paper on **Physicians in Fiction**, his title being **Physicians as Seen by Henrik Ibsen**.

The chair appointed the following committee of seven to consider the A. M. A. 1908 convention: Drs. Jackson, Jane, J. W. Graham, Arneill, Hall, W. W. Grant and Robert Levy.

Dr. Carmody reported for the Reception Committee.

On motion the Society adjourned. Members present, 47.

ALBERT SILVERS'LEIN, Secretary.

The annual meeting of the **San Luis Valley Medical Society** was held at the Monte Vista hospital May 8, 1907, Dr. C. L. Orr presiding.

The minutes of last meeting were read and approved.

Communications from former secretary, Dr. A. R. Pollock, and Dr. W. A. Lockett of Fruita, were read.

The general subject of discussion was **Skin Diseases**.

Dr. Russell reported an unusual case of **erythema nodosum**. Dr. Trueblood, two cases of **eruption following rheumatic attacks**. Dr. McFadzean, **Dermatitis** simulating measles in child four days old. Dr. O. P. Shippey, cases of evanescent **scarletiform eruption** in la grippe. Dr. Doane of Del Norte, a case of **actinomycosis** in a stockman. Dr. Rosebrough, a case of **recurrent eruption** several times a year for past fourteen years, following scarlet fever.

Dr. Melvin discussed the needs and obligation for a physical examination of all school children for physical and mental defects, and outlined work now being done in our larger cities.

The treatment of **acute catarrhal conjunctivitis** was discussed by Dr. Trueblood, of Monte Vista.

All reports were followed by a general discussion from all members present.

The following resolution was unanimously voted, in harmony with recommendations of House of Delegates of the State Society:

Resolved, That the minimum to be accepted by members of this Society for old line **life insurance examinations** be \$5.00; for examinations for fraternal orders, \$2.00.

Drs. Clarke, of Del Norte; Doane, of Del Norte; Pruce, of Monte Vista; N. R. Smith, of San Luis; and Chisholm, of Antonito, were then elected to membership.

The following officers were then elected for the year 1907: Dr. Jno. McFadzean, of Del Norte, President. Dr. T. Rosebrough, of Hooper, Vice-President. J. T. Melvin, of Saguache, Secretary and Treasurer. Dr. O. P. Shippey, of Saguache, delegate; Dr. C. L. Orr, representative at the Glenwood meeting. Drs. Shippey and Melvin, auditing committee.

Adjourned to meet at Wagon Wheel Gap in August.

The Society then visited the new Monte Vista hospital under the escort of Drs. Russell and Trueblood, after which a lunch was tendered by the Monte Vista members.

Ten members were present from six towns, some members having to make a ninety-mile buggy drive to attend and return.

J. TRACY MELVIN, Secretary.

## Other Societies

### Colorado Ophthalmological Society.

The April meeting was held at the office of Dr. Melville Black, who acted as chairman.

Dr. D. H. Coover presented a man of forty with one eye gone and the other showing **multiple corneal scars** and an **opaque dislocated lens**, the result of an explosion five months previous.

Dr. D. B. Strickler showed a woman of thirty-two with a **crescentic corneal opacity** near the outer limbus, following episcleritis close to the inner corneo-scleral limbus four months before.

Dr. Black exhibited a case of **recurring retinal hemorrhages**, with indicanturia; and reported a case of **neuro-retinitis** associated with arterio-sclerosis.

Dr. Libby showed a man of forty with **double optic atrophy** and beginning tabes. There was a history of syphilitic infection eighteen years before, excessive use of alcohol and tobacco, and traumatism of lip, symphysis pubis and upper jaw four years before.

Dr. J. R. Robinson reported a pregnant woman of twenty-five with severe neck pains and sudden **blindness** at six and one-half months. She was relieved by active catharsis so that vision was restored. Coma occurred at the seventh month, lasting half a day, when death occurred. It was the opinion of members who discussed this case that death was the result of uremia rather than albuminuria, although an inadequate report on the urine stated that it was "loaded with albumin."

Dr. Coover reported very satisfactory results in shrinking **pterygium** by 4 or 5 per cent **dionin**, in six cases using the drug both before and after operation. He also reported **detachment of retina** in a child of four years, following whooping cough.

Dr. Jackson reported a band of **calcareous deposit in cornea** of each eye in an adult. Curetting resulted in R. V.=4-12, L. V.=4-9 partly.

Dr. W. L. Hess reported a similar case, in one eye only, in which curetting resulted in vision of 6-8.

The Secretary's report showed the attendance, interest and work of the Society for the past year to be fully up to its high standard.

Drs. Libby and Black were re-elected Secretary and Treasurer, respectively, and Dr.

Strickler was elected chairman of the executive committee.

Adjourned until the third Saturday in October. **GEORGE F. LIBBY**, Secretary.

## New Members

Doane, B. L., Del Norte; Bruce, T. E., Monte Vista; Smith, W. R., San Louis; Chrisholm, A. F., Antonito; Didrickson, F. G., Montrose; Cross, John, Naturita; French, Samuel, Meeker; Lockett, W. A., Fruita.

## Items

Dr. J. M. Blaine, who has been confined at the Mercy Hospital for the past month, has resumed his practice, a fact which his many friends in the profession will be as glad to know as we are to announce it.

Dr. C. E. Ruth, formerly of Keokuk, announces his removal to 1370 Gilpin street, Denver, Colo. His practice will be limited to Surgery, Gynecology and general consultation.

Dr. J. N. Hall addressed the Utah State Medical Association upon the occasion of the annual meeting, at Salt Lake City, May 7th, upon "The Need of Earlier Diagnosis."

### NOTED NEUROLOGIST DEAD.

A communication received from the widow and family of the late Dr. Charles Samson Fere of the Bicetre Hospital, tells of the death of this well known neurologist and author at Paris April 22, 1907. Dr. Fere was an indefatigable worker and prolific writer in neurological fields. He was probably best known to Americans through his contributions to the Twentieth Century Practice, of which his essay on hysteria remains especially comprehensive and noteworthy. In recent years he was interested in problems pertaining to the physiology of the nervous system, along which line he accomplished not a little research work. Dr. Fere's demise at the age of fifty-four years was untimely and the loss of so zealous a laborer in scientific neurology must be deplored by every colleague. B. O.

### CONGRESS OF PHYSICIANS AND SURGEONS.

The seventh triennial session of this Congress was held in Washington, D. C., May 7th,



8th and 9th. The component associations and societies are as follows:

American Ophthalmological Society; American Otological Society; American Neurological Association; American Gynecological Association; American Dermatological Association; American Laryngological Association; American Surgical Association; American Climatological Association; Association of American Physicians; American Association of Genito-Urinary Surgeons; American Orthopedic Association; American Physiological Society; American Pediatric Society; American Medico-Psychological Association.

The program of each department included a super-abundance of papers, as may be imagined when it is stated that they aggregated 354, an average of over twenty-three for each section.

At a meeting of the Board of Directors of the **National Association for the Study and Prevention of Tuberculosis** held in Washington May 7th, 1907, the following resolutions on the death of Dr. S. E. Solly, a former member of the Board, were unanimously adopted:

WHEREAS, The Directors of the National Association for the Study and Prevention of Tuberculosis have learned with sincere sorrow of the death of their colleague, Dr. S. E. Solly, of Colorado Springs; and

WHEREAS, By his great medical ability and no less by his unusual personal charm, he had both endeared himself to them and proven a wise counsellor in their deliberations; therefore, be it

RESOLVED, That in his death they have lost a member whose place cannot easily be filled; one whose distinguished professional attainments did honor to this body to which he belonged and whose remarkable gifts of heart equally with those of mind, made him ever welcome in their midst; and be it further

RESOLVED, That the Secretary be directed to send a copy of these resolutions and assurances of our deep sympathy to this bereaved family; that a copy be spread on our minutes and that they be published in Colorado Medicine, the official organ of the Colorado State Medical Society, in the Journal of the American Medical Association, in Medical Record, and in the Journal of the Outdoor Life, the official organ of the National Association for the Study and Prevention of Tuberculosis.

## Announcements

An examination for the grade of assistant surgeon in the Public Health and Marine Hospital service will be held at the Bureau, 3-B street S. E., Washington, D. C., July 15, 1907, at 10 o'clock a. m.

## Books Received

[All books received will be acknowledged in this column to be recognized by the contributor as the equivalent. Reviews will be made of these volumes according to merit and the interests of our readers.]

**A Treatise on the Practice of Medicine.** For Practitioners and Students. By Arthur R. Edwards, M. D., Professor of the Principles and Practice of Medicine and Clinical Medicine in the Northwestern University Medical School, Chicago. Octavo, pp. 1,328, illustrated, with 101 engravings and 19 plates. Cloth, \$5.50, net. Lea Brothers & Co., Philadelphia and New York, 1907.

## PAMPHLETS AND REPRINTS.

Fifty-eighth Annual Report of the Board of Trustees and Superintendent of the Central Indiana Hospital for Insane, Indianapolis, Ind. For the fiscal year ending October 31, 1906. Paper, pp. 119.

The thirty-seventh report of the Central Free Dispensary of West Chicago at Rush Medical College, for the period of four years, extending from January 1, 1903, to December 31, 1906. Paper. PP. 30.

Fractures of the Femoral Neck—Anatomic Treatment, by C. E. Ruth, M. D.

Fernand Henrotin, by Nicholas Senn, M. D.  
The Treatment of Coryza, by E. S. McKee, M. D.

The Cure of Consumption with Subcutaneous Injections of Oils, by T. B. Keys, M. D.

What Can the Organized Medical Profession Do to Aid in the Suppression of Quackery? by Henry W. Cattell, M. D.

Abnormality in Amniotic Secretion in Its Relation to Fetal Malformation, by Joseph Brown Cooke, M. D.

Tendon Tissue Versus Catgut, by N. Senn, M. D.

Eighth Biennial Report of Colorado State Board of Health—January 1, 1905, to December 31, 1906. Smith-Brooks Press, State Printers, Denver, 1907.

## Books Reviewed

**The Practice of Obstetrics, In Original Contributions.** By American Authors. Edited by Reuben Peterson, A. B., M. D., Professor of Obstetrics and Diseases of Women in the University of Michigan, Department of Medicine and Surgery, Ann Arbor, Mich. Octavo, cloth; pp. 1087; illustrated with 523 engravings and 30 full-page plates. Price, \$6.00, net. Philadelphia and New York: Lea Brothers & Co., 1907.

This work consists of over 1,000 pages of practical obstetrics. The articles are contributed by ten well-known specialists, as follows: The Physiology and Development of the Ovum, by G. Karl Huber, M. D., Professor of Histology and Embryology, University of Michigan. The Physiology of Pregnancy, by Walter P. Manton, M. D., Professor, Adjunct of Obstetrics Detroit College of Medicine. The Physiology of Labor, by W. A. Newman Dorland, M. D., Author of Dorland's Obstetrics, Etc. The Physiology of the Puerperium, by Henry Lewis, A. B., M. D., late Assistant Professor of Obstetrics and Gynecology in the Rush Medical College; and Charles Sumner Bacon, Ph. B., M. D., Professor of Obstetrics in the College of Physicians and Surgeons, Chicago, Ill. The Pathology of Pregnancy, by Hugo Ehrenfest, M. D., Assistant Professor of Obstetrics in the St. Louis University, by Aldred Scott Warthin, Ph. D., M. D., Professor of Pathology, University of Michigan.; and by Benjamin R. Schenck, A. B., M. D., Formerly Instructor in Gynecology in the Johns Hopkins University, Baltimore, Md. The Pathology of Labor, by John F. Moran, A. B., M. D., Professor of Obstetrics in the Georgetown University, Washington, D. C.; and Hugo Ehrenfest. The Pathology of the Puerperium, by Henry Lewis and Charles Sumner Bacon. Obstetric Operations, by Montgomery A. Crockett, A. B., M. D., Formerly Adjunct Professor of Obstetrics and Gynecology in the Medical Department of the University of Buffalo. The New-Born Infant, by Henry Lewis and Charles Sumner Bacon.

We learn from the preface that the volume was designed, above all, to be practical, but that theory where it is the key to practice, has not been neglected. Each contributor has been free to develop his subject in accordance with his own experience following, of course, a plan carefully arranged to insure this completeness and uniformity of the suc-

cessive chapters, whereby ease of consultation is promoted and the domain is adequately covered as a whole.

The simplest and most logical arrangement has been adopted, as the normal must precede the abnormal, the physiologic aspects of each condition are fully considered, and then the pathologic or abnormal side is treated in equal or, where necessary, even greater detail. Special attention has been given to the series of illustrations. They are abundant and largely selected from original photographs, taken from life.

Our persual of the book convinces us that the preceding statements are true.

The arrangement of the contents is simple and practical. We are delightfully surprised at the character of the part devoted to Embryology. We did not think that an Embryologist could write such a practical article. All of the chapters are very well written and should receive no unfavorable criticism, except that a practical work on obseterics should always first express definitely the classifications and opinions of the majority of obstetricians and then the author's view.

The number of repetitions, and typographical errors are few. This book is thoroughly up-to-date and should occupy the front rank among Obstetric text-books. We wish to congratulate the editor, the authors and the publishers upon the excellence of the work.

T. MITCHELL BURNS.

**Diseases of the Lungs, Designed to be a Practical Presentation of the Subject for the Use of Students and Practitioners of Medicine.** By Robert H. Babcock, A. M., M. D., Author of "Diseases of the Heart and Arterial System;" until recently, Professor of Clinical Medicine and Diseases of the Chest, College of Physicians and Surgeons (Medical Department of the Illinois State University), Chicago; Consulting Physician to Cook County Hospital, Mary Thompson Hospital, etc., etc. With Twelve Colored Plates and One Hundred and Four Text Illustrations. First Edition. Octavo, Cloth; pp. 809. Price \$6.00. New York and London: D. Appleton & Company, 1907.

This latest work from the pen of Dr. Babcock is divided into three sections, namely: Diseases of the Bronchi; Diseases of the Lungs; and Diseasaes of the Pleura, which adds to its clearness of arrangement.

Most commendable are the chapters devoted

to the treatment of each disease, in which the reader is given the results of Dr. Babcock's ripe experience and unfailing judgment. Considerable space is devoted to therapeutics, yet there is nothing superfluous, so that one is not left to flounder perplexed in the midst of a multiplicity of remedies.

The chapter on hemoptysis is also deserving of special mention, the importance of this subject rightly warrants the author in devoting an entire chapter to its consideration. Dr. Babcock gives the records of many interesting cases which are of great interest and very helpful in diagnosis.

This book will not, in my opinion, prove ephemeral, but will take its place among the classics destined to occupy a lasting place in the medical libraries.

SIMON.

**International Clinics, A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Etc.** By Leading Members of the Medical Profession Throughout the World. Edited by W. T. Longcope, M. D., with the collaboration of W. Osler, M. D., J. H. Musser, M. D., A. McPhedran, M. D., and others. Vol. I, Seventeenth Series. Cloth, pp. 318. Price, \$2.00, net. Philadelphia and London: J. B. Lippincott Company, 1907.

This volume opens the seventeenth series of the Clinics, and is in keeping with the high standard these works have maintained.

The *Psychic Treatment of Some of the Functional Neuroses* is presented by Dr. Llewellys F. Barker in a most splendid manner. Dr. F. P. Gay contributes *Recent Advances in the Prevention and Cure of Tuberculosis*. *Enlargement of the Thymus and Its Clinical Diagnosis* is written by Dr. J. J. Walsh. *Exhaustion and Toxemia as Underlying Factors in the Production of Neurasthenia, Hysteria and Delirium*, by Dr. Theo. Diller, is timely, well handled and worthy of careful reading by the general practitioner as well as the specialist. The Surgical Clinical lecture by Dr. N. Senn is noteworthy. *Intraocular Angiosclerosis and its Prognostic and Diagnostic Significance* is another valuable contribution by Dr. DeSchweinitz.

The volume concludes with a resume of the Progress of Medicine during 1906.

As a whole, the work is of unusual interest as a record of the best work of the year.

**The Practitioner's Medical Dictionary.** An illustrated Dictionary of Medicine and Allied Subjects, Including All the Words and Phrases Used in Medicine, With Their Proper Pronunciation, Derivation and Definition. By George M. Gould, A. M., M. D., author of "An Illustrated Dictionary of Medicine, Biology and Allied Sciences," etc. Editor of American Medicine. With 388 illustrations. Octavo, xvi., 1,043 pages. Flexible leather, gilt edges, rounded corners, \$5.00; with thumb index, \$6.00 net. P. Blakiston's Son and Company, Publishers, 1012 Walnut St., Philadelphia.

The dictionary has been proverbial for its bulk and small type. But the adoption of a superior thin paper brings this dictionary down to the size of an ordinary 300 page book, while allowing the use of fair-sized type. Among new features it contains the terms of the Basle Anatomical Nomenclature (BNA); the standards of pharmaceutic preparations authorized by the eighth decennial revision of the United States Pharmacopœia, and tables of signs and abbreviations used in general medicine and the specialties.

E. J.

**Essentials of Prescription Writing.** By Bernard Fantus, M. D., Professor of Materia Medica and Therapeutics, College of Physicians and Surgeons of Chicago, the College of Medicine of the University of Illinois; also Professor of Materia Medica and Therapeutics, Jenner Medical College of Chicago. 12mo. 136 pages. Chicago Medical Book Company, 1906. \$1.00 net prepaid.

This little book deals with the subject in a complete and systematic, yet concise manner.

E. J.

**A Practician's Hand-Book of Materia Medica and Therapeutics**, based upon established physiologic actions and the indications in small doses. By Thomas S. Blair, M.D. Pp. 253. Cloth. Price, \$2.00, net. Published by The Medical Council, Philadelphia, Pa.

This is by far the most comprehensive and concise work in this line that has come to our notice.

It is alphabetically arranged for the reference of a busy practitioner.

Conspicuous are the common sense statements throughout. The index is well arranged, facilitating rapid reference.



# COLORADO MEDICINE

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All communications to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are typewritten.

Communications and items of interest are invited from all parts of the state. Death notices, removals, changes of address, etc., are especially desired.

Secretaries of the County Societies are earnestly requested to report their meetings, including the subject matter of the papers presented, and in general, the substance of the discussions.

Marked copies of local newspapers, or clippings, containing matters of interest to the profession will be gratefully acknowledged. The name of the sender should be given.

The journal will be issued on the 15th of each month. All copy must reach the editor not later than the first of the month. Advertisements of proprietary medicines will be accepted provided the preparations advertised have been approved by the Council of Pharmacy and Chemistry of the American Medical Association. Address all communications regarding advertising to

JAMES M. BLAINE, M. D., *Adv. Mgr.*, 3-4 Steele Block, Denver, Colo.

## IMPORTANT NOTICE.

All members of the Colorado State Medical Society are entitled to a copy of this journal each month. Failure to receive the same, and change of address, should be promptly communicated to the editor.

VOL. IV.

DENVER, JULY, 1907

No. 7.

## Editorial Comment

### AMERICAN MEDICAL ASSOCIATION MEETING FOR 1907.

At the recent meeting of the A. M. A., at Atlantic City, the attendance was 3,700, not so many as at the Boston meeting last year, where there were 4,700 registered; but a marked gain over the 2,890 at the Atlantic City meeting three years before. It may be taken as fairly representative of the steady growth of the Association. Colorado was represented by thirty-one members registered.

The scientific work done in the sections was probably equal to that done at any previous meeting. The weaker sections show most marked gains. None held less than four well-occupied sessions; while four of the sections held a sixth session on Friday morning. A notable event was the joint session of the Sections on Practice of Medicine, Surgery and Anatomy, and Physiology and Pathology, attended by some 2,000 mem-

bers, who listened to papers on Exophthalmic Goitre by Beebe of New York, MacCallum and Barker of Baltimore, Preble of Chicago, and Albert Kocher of Berne, Switzerland. These were discussed by Halsted, Billings and Mayo.

This year two of the sections had the papers to be presented before them printed and distributed to the members in advance of the meeting; and in the Section on Ophthalmology, in which this was first tried last year, the increase in value of the discussions was quite apparent. A reading of the minutes of the sections published in the *Journal of the A. M. A.* for June 22, gives a fair idea of the scientific importance of these meetings. From Colorado papers were presented or discussed by Drs. Arneill, Wetherill, Grant, Jackson, Levy, Cattermole and Davis.

In the House of Delegates Colorado was actively represented by Drs. Work and Hall. The former served on the Reference Committee on Legislation and Political Action; and he secured the

adoption of his resolution regarding insurance examinations. At the election of officers, Dr. W. W. Grant, of Denver, was re-elected one of the trustees. Dr. W. A. Jayne was continued on the Standing Committee on Transportation and Place of Session.

The organization of the House of Delegates is now so far perfected, and so many of the delegates are already familiar with the work they have to do, that the affairs of the association can be carefully considered, and the necessary business dispatched without unnecessary waste of time. By holding a session on Monday the house was able to adjourn over Wednesday, allowing the delegates to participate in the Scientific Proceedings.

Among the important matters coming before the house this year were certain amendments to the constitution and by-laws. By one of these the *Judicial Council* is reorganized. It now consists of five members "to be appointed by the president on the first day of each annual session from the delegates present, and to continue in office until their successors are appointed."

An extremely important undertaking was entered upon by the adding to the standing committees of the association a *Board of Public Instruction on Medical Subjects*, consisting of seven members, each holding office for four years; one or two elected each year: "The functions of the board shall be: To supply the community at large with established facts regarding matters of general moment and public health. To supply these facts ethically, in good taste, and without the element of individual advancement. To harmonize and to give the added value of combined effort to the several interests which are now working independently for the com-

mon good along medical lines. To direct this work under the auspices of the American Medical Association, thus giving unity of purpose among the workers and public expression to the aim and aspirations of the National Association."

By another amendment is created a class of *associate members*, "students of science allied to medicine, resident in the United States, and not eligible to regular membership may become associate members of this association on recommendation of the officers of a section and on election by the House of Delegates." There were also recognized by a special section *invited guests*, who, upon invitation of the officers of the association, or of one of the sections, will hold to the association the relation of associate members for a single year.

That the House of Delegates is truly a deliberative body, was illustrated this year by the discussions which took place regarding some of the amendments which were rejected; on the question of endorsing the re-establishing of the army canteen; and the discussion on the reports of officers and trustees. The members of the A. M. A. should, in general, be better acquainted than they are with the work of the House of Delegates. Its sessions are not secret, and they are often extremely interesting. At least each member might carefully study the minutes of its doings, as published in the *Journal* of June 8th and 15th.

The adverse criticism of officers and trustees that has become so common in certain journals, under the discussion that occurred, appear in its true light, as mere perverse faultfinding. It has been indulged in by those wholly and manifestly ignorant of any exact system for the conduct of a large business enterprise. It may be wise to give would-be critics the freest opportunity for attack, but del-

legates found it hard to listen with any appearance of patience to objections based on ignorance that refused to be enlightened.

No one familiar with the work of the House of Delegates can fail to be struck with the impossibility of any state exerting its proper influence in this body through delegates changed every two years; replaced as soon as they have become moderately familiar with the work they are expected to do. In such a body those familiar with its methods and its personnel will always exercise a dominant influence.

As a place of meeting, Atlantic City again demonstrated its superiority. It is easy to predict that not many years will elapse before the association again meets there. The present policy regarding entertainments leaves the Association free to go as often as it chooses. The only burden placed upon the local profession this year was the entertainment of the ladies, and such private courtesies as were voluntarily shown to personal friends or limited circles of acquaintances.

Next year the meeting goes to Chicago. It was invited there both by the State Medical Society and the local profession. For several years there has been a feeling that it was time to receive such an invitation from the city where the headquarters of the Association are situated, and when it was forthcoming no other place was seriously considered. The profession of Chicago fully realize how difficult it will be to comfortably provide for the accommodation of such a meeting in their crowded city. But there is no doubt that they will make the meeting a successful one, and in many ways attractive to the members of the association.

E. J.

### *THE ENTERTAINMENT FEATURES OF THE GLENWOOD MEETING.*

The coming meeting of the State Society at Glenwood Springs on September 17, 18 and 19 is only two months away. We are now acquainted with some of the nice things the entertainment committee has in store for us. The meeting of the society will be held in the Hotel Colorado. This is one of the most attractive hotels in the country. It is run on the American plan only, and is a pleasure resort hotel of the highest order. It is equipped with everything we need in the way of rooms for our meeting. They have made us the following rates: One person in a room without bath, \$3.50 per day; two persons in a room without bath, \$3.00 per day each; one person in a room with bath, \$4.50 per day, and two in rooms with bath, \$4.00 per day each. These rates are considerably below their customary charges. Very considerably lower rates can be obtained at other hotels in Glenwood. The chairman of the Entertainment Committee, Dr. W. W. Crook of Glenwood, will gladly furnish further information in this particular.

Glenwood Springs is especially noted for its bathing facilities. Every member of the state society will be sent a pass to the baths, pools and cave baths, good not only for themselves but for members of their family as well. This is an invitation which never has been issued before to any visiting society, and will prove one of the most attractive features of entertainment.

The committee have under consideration a special train to carry the members through the Canon of the Grand. At Shoshone, Colo., they will leave the train and become the guests of the Central Colorado Power Company. This company, which is now engaged in build-



ing the greatest power project ever begun in Colorado, proposes a trip for us through the most beautiful piece of scenery in the world, to the Hanging Lake; they will then place their train and horses at our disposal, and upon our return will furnish a dinner at their own expense.

Carriages will be constantly at the disposal of our members during the entire time of the meeting for the purpose of making drives into the mountains, etc. The Hotel Colorado will give us a dance every evening if we wish it. We will have Dr. Mayo as our guest, also Dr. J. N. McCormack. These gentlemen will deliver addresses on separate evenings, but they will be short and plenty of time will remain afterward for dancing, etc.

The Hotel Colorado closes October 1, therefore, during our stay, we will have the hotel practically to ourselves. Every evening our dinner can be in the nature of a banquet if we desire, i. e., we can have it so arranged that we can all sit down together have a toastmaster and the usual ceremonies.

We have arranged the scientific program from 10 to 1:30. The afternoons will be devoted to pleasure.

A special train will leave Denver, Monday morning at 9 o'clock, September 16, via the Midland, which will put us into Glenwood at 8 o'clock that evening. Everyone desiring to make connections with this train can do so at Denver, Colorado Springs and Divide.

In order to let the railroad officials know how many cars to put on, we will send out postal-cards asking for a reply upon attached postal. These postals will be mailed early in September to every member of the society accessible to this train. We are trying to make the special train a feature of the trip, and it is hoped that everyone who can will take this train.

MELVILLE BLACK, Secretary.

### IMPORTANT.

The attention of those members selected to represent their constituent society on the scientific program at Glenwood Springs is called to the following, being Article 6, Chapter IV, of the by-laws of the Colorado State Medical Society: *"Every paper read before the society shall be its exclusive property, and shall be deposited with the secretary when read. If not so deposited, the committee on publication may decline to publish it."*

It may be stated, however, that papers devoted to special subjects may, by permission, be published in journals devoted to such special subjects, provided that it does not appear in such journals prior to its publication in COLORADO MEDICINE. Under the same conditions, permission may be obtained to publish papers in journals of national circulation, by application to the committee on publication.

### VALUABLE COMPILATIONS FOR PHYSICIANS.

Two brochurs have been received from the press of the American Medical Association. One entitled "The Propaganda for Reform in Proprietary Medicine," which is a compilation of *facts* concerning many of the proprietary medicines which have been imposed upon the credulous physicians with the reasons and evidence of their inethicality and the attitude of their manufacturers toward the Council of Pharmacy and Chemistry.

The other, "New and Non-Official Remedies," is a reprint of the list of articles which have been tentatively approved by the Council, containing a description of the articles so approved, with the process of manufacture, percentage of constituents medicinal action, indications and dosage.

Both are obtainable from the American Medical Association, the former at five cents per copy, a price less than the cost, to facilitate circulation.

## Original Articles

### *THE DEVIATED NASAL SEPTUM IN THE CAUSATION OF RESPIRATORY DISEASES.\**

By AMOS R. SOLENBERGER, M. D.,  
Colorado Springs, Colo.

I have chosen from among the many causes of nasal respiratory obstruction the deformed septum because it seems to me to be a most important segment in the pathologic circle of respiratory diseases, and a study of it I think will show it to be the starting point of many respiratory diseases.

The facts and principles I advance, though familiar to members of this section, are very little understood by the large majority of general practitioners. The study, too, being largely etiologic, will deal with those forces which especially need to be known by the same large class, because they constitute the foundation of the most effective work we as physicians are bound to do, viz.: the prophylactic measures. Then, too, of all the forms of nasal obstruction the deviated septum as a causal factor in respiratory diseases is the least recognized. In most cases, too, the deviated nasal septum, as well as its associated conditions, to the eye untrained to focus light into dark cavities, are necessarily hidden—at most these processes are insidious. The patient is seldom conscious of his deformed septum, unless it is due to traumatism or the stenosis is extreme. Compensation, too, is a quieting factor, so that the numerous symptoms to which deformity gives rise are invariably referred to other causes, which causes, if rightly interpreted, are themselves effects—diseases having had their rise in the deviated septum.

If the patient himself takes the initiative, it is one who either recalls a "broken nose" or one who has come to respiratory extremis of one sort or another, or a "mouth-breather" with one of the forms of its resultant respiratory diseases. This form of nasal obstruction is more likely to result in permanent injury because it is permanent. Other forms may and do change and even disappear.

Thus far, too, the deformed septum has remained uncorrected more than other forms of obstruction because, perhaps, though recognized by the general practitioner, he shrinks from applying remedial measures because of the supposed formidableness, and, perhaps, of the indifferent success following the older corrective methods. However, the chief cause of neglect, I believe, we must attribute to the fact that this form of nasal obstruction, or, to make the statement broader, as it should be, that nasal obstructions in general, as causal factors in respiratory disease, are yet for the most part undiscovered or unappreciated by the general profession. The pathologic circle containing the deformed nasal septum has indeed been made account of for a long time, but the deviated septum as a segment of it has, I believe, not been given its due proportional importance. I am sure that if our study succeeds in bringing out its true significance it will be useful and advanced teaching.

#### NATURE OF THE FORCES WHICH MAKE FOR SEPTAL DEFORMITY.

We are, first, interested in the forces that make for the integrity of the septum, and second, in the forces which make for its deformity. We shall, perhaps, sufficiently see the nature of the first by a study of those forces which deform.

Shall we put traumatism first? Patent as this causal force is, especially in childhood, to be logical in our study we should

\*Presented before the Colorado State Medical Society, October 11, 12 and 13, 1906.

begin with life in embryo. For convenience, I would project a diagrammatic scheme without aiming at a fixed classification, following somewhat the plan of Kohler, who has given us a noteworthy etiologic study of deformities of the superior maxilla.

Arranging the links in the pathologic chain in their consecutive order, we put the first group the predisposing causes, or indirect; in the second, the exciting causes, or direct. Heredity, malnutrition, lymphatic temperament, neurotic tendencies, strumous, syphilitic, or other diatheses; blindness, deaf-mutism, imbecility, idiocy, tendencies toward constitutional weakness. We recognize in these pathologic conditions forces, associated with bone deformities, and as, in themselves, frequently causes. We know that an individual possessing such constitutional weaknesses becomes an easy prey to or an apt sufferer from the second class of forces, viz., traumatic, climatic and bad hygiene.

Both classes of natural or constitutional causal forces and external environmental causal forces converge to produce certain effects. We may further classify these effects as (1) immediate, and (2) remote or ultimate. In the first or immediate we recognize disease of the superficial tissues; in the second disease of the deeper tissues or organs. Among the immediate effects we see simple inflammation, tissue swellings, enlargement of adenoid or lymphatic tissues. Among the ultimate effects we note bone deformities, atrophies of the mucous membrane, and the numerous chronic diseases from the simple chronic inflammation of the superficial tissue to the infectious and malignant inflammatory proliferation of the organs.

#### MODUS OPERANDA OF THE INDIRECT FORCES.

*Heredity.* While we recognize that bone deformities of the head are fre-

quently congenital; that a deviated septum, like a hare-lip, may be a direct inheritance, and much interest may attach to the fact that what is habit in the parent may become instinct in the child; or, to be more exact, that defective tissue or organ may be transmitted from parent to child; it is perhaps more important that we attach great weight to the much larger class of *indirect* forces—forces likely to be overlooked because more subtle and obscure in their operation—I refer to the inherited tendencies or to that inherited tissue which predisposes to disease, such as weak nerve tissue, weak vaso-motor tissue (the physical basis of neurasthenia), weak glandular tissue, weak lymphatic tissue. For in all diseases is it not the *quality* of tissue that is at fault? Is not every disease in a large sense a tissue disease?

We may at present consider only one type of tissue, the disease which illustrates the nature of the workings of the disease-producing forces which make for nasal obstruction, mouth breathing, and facial deformities.

#### THE EVOLUTION OF EXCESSIVE ADENOID TISSUE.

Some tissue develops fully in utero, others show strong tendencies toward cell proliferation. The former is of the highest type, the latter of the lowest, e. g., fatty or connective tissue. This latter is the type which after birth often hinders the normal growth of the higher, and which, upon the slightest internal or external irritant greatly accentuates its development, thus becoming a most prolific factor in mouth breathing and facial deformities.

Whether or not this condition exists to the degree constituting the lymphatic temperament or other diatheses, as the strumous, it is upon such tissue that the direct causes of climate, bad hygiene, bad environments, etc., act as exciting causes,



not only of its further proliferation, but of its actual disease. The nasal hypertrophies, adenoid vegetations, enlarged tonsils and deviated septum, if not existing *ab initio*, are simply the advanced product of the same developmental process working from the beginning and fed by the environmental influence in which the child lives.

#### DANZIGER'S THEORY.

I would refer to yet one other hereditary cause of septal deformity frequently overlooked because remote. It has an embryonic beginning, but it extends through childhood to early adult life. It may be called congenital or may come under the head of inherited tendencies. I refer to the premature fusion of the separate bones at the base of the skull. These bones unite gradually during the growth of the child, but the baso-occipital and sphenoid do not completely fuse until early adult life. It is from this knowledge and from extended study of the living and dry skulls, in cases of facial deformities generally, that Danziger seems to have proven certain facial deformities to be due to premature fusion of the baso-occipital and sphenoid bones, the result of which is the shortening of the distance between the foramen magnum and the sphenoid body. Danziger shows from this anomaly that the pressure exerted upon the sides of the superior maxillary bone is sufficient to narrow and push up the palatine roof. In the presence of this developing force the nasal fossae and the entire nose and pharynx become narrow; the nasal septum either goes over, or more frequently remains in line, pushing up the ethmoidal roof into the cerebral space. It would seem thus that a deflected septum may have its etiologic origin in utero, though the deformative process and the deformity itself are not recognized till long after birth. This theory no doubt

explains how the occasional facial deformities have come to be in the absence of any disease (adenoids) of the nose and throat whatever.

#### DIRECT CAUSES OF SEPTAL DEVIATIONS—

##### THE MODUS OPERANDI OF THE DIRECT CAUSES.

While studying the direct causes of nasal stenosis we should always keep in mind the indirect or constitutional forces, for in nearly all cases they are concomitant, accentuating causal factors.

##### TRAUMATISM.

Injury of the nose in childhood by falling upon it is so common that few children escape it. It is only the most robust who do not suffer from dislocation or deviation of the cartilaginous septum. Such effect need be but slight in cases of constitutional weakness or cell proliferation of the adenoid tissue. Such slight deformity all through the period when the septum is nearly all cartilage and the bony tissues of the face are plastic, not only develop in the course of ossification into deformities of the bones, but often *para passu* with the deformative process goes on the excessive growth of the soft tissues—that of the entire “adenoid ring”—the two forces (conditions) reacting on each other etiologically, the resultant force always tending toward nasal stenosis and mouth breathing.

It need hardly be noted that these traumatic deformities are seldom corrected in the green; and it is only in very recent years that any corrective attention has been given them, usually after the plastic period, when the vicious pathologic circle has been permanently described. Traumatic deformities in the adult are usually *ab initio* of the bony part, the deforming force having been delivered upon the nasal bones, (unlike those of the child in which the deforming force is received on the tip or cartilages of the nose.)

The septum either deviated or the fractured ends telescoped. In either case callus grows out along the lines of highest pressure or along the lines of fracture, forming the familiar spurs or exostoses. In the presence of these growing spurs the deviated septum becomes more obstructive in the very process of its self-repair.

In the adult, too, these fractures are seldom set in the green, perhaps because usually seen by the general surgeon (if seen at all) who, being unaided by focused light, fails in properly coapting and splinting the fragments of bones.

As a matter of fact, though, the rhinologist knows that the larger majority of obstructive deformities date back to the various causative forces at work in childhood.

We can make but a mere reference to influence of climate, bad hygiene and unfavorable environments. Just to give them their place in the causation of the disease circle. We know too well that these direct factors are always and everywhere at work in our civilized life, if not creating them, accentuating all those conditions which result in nasal stenosis, mouth-breathing and insufficient aeration of the cavities of the head and lungs.

Whether there is inherited degenerate tissue or acquired degenerate tissue, the common sequence is a physical condition of weak resistance to both internal and external irritants.

The tissue under study is weakly organized, is of low life and feeble resistance. Irritating or foul air, acting through the inspired air from without, poor and faulty food, malnutrition, malassimilation, irritating waste substances in the blood acting from within, constitute a double fire of irritants upon the respiratory tissue, and thus this tissue is con-

stantly subjected to the round of irritation, congestion, inflammation, cell proliferation, infection, and disease.

By acquired degenerate tissue is meant adenoid tissue healthily born, born with normal vitality and adequate resistance to the ordinary irritants of environmental forces, but which has become degenerate through the direct forces of traumatism, bad private and public hygiene infectious diseases.

We have now seen, in a general way at least, how the direct and indirect forces converge to produce certain effects. *Indirect*—Simple inflammations of the superficial tissues, swellings, enlarged tonsils, enlarged adenoid tissues. *Remote*—Chronic inflammations of the deeper tissues, tissue hypertrophies, tissue atrophies, bone deformities; and how in turn these effects become conditions which result in mouth-breathing.

It is, of course, obvious that the deviated nasal septum in the obstructive form itself, causes mouth-breathing, but that the converse, viz., mouth-breathing, causes septal deformities, has not been so clearly understood.

Briefly, the pathologic process is perhaps this: In the open mouth the tongue is displaced by the dropping of the jaw. The tongue is the natural and indispensable moulder of the palatine vault; it is the positive force; it now becomes, if not a negative force, a neutral one against the persistent pressure of the muscles of the cheek. The plastic alveolar process yields to this pressure, and narrows the vault.

Then, too, in mouth-breathing the nose having lost its function and normal stimulus, is checked in its osseous development. This is observed externally in the retraction of the tip of the nose and the upper lip. Thus is created in the nasal passage, if not a negative force, yet a

neutral condition against a very positive outside force. To this also is added, in nearly all cases, a nervous element, if not inherited, then acquired by loss of normal resting place of the jaws. Mental comfort is sought in a kind of conscious compensation by forcing the lower lip upward underneath the retracted upper lip and incisors, creating the nervous habit of lip biting and other uneasy movements. There are, no doubt, other causes which contribute to the formation of the narrow arch.

There are also certain periods of childhood when there is a disparity in the development of the various parts of the face when the nasal septum is thus checked in its osseous growth. Here, at least, we have a combination of forces which conspire to lift the palatine arch in the presence of which the nasal septum (if not finding normal resistance in a firmly developed ethmoidal roof) protrudes into the cranium; but if the ethmoidal roof offers normal resistance, which is, perhaps, the usual condition, the septum is shortened and thickened in its vertical axis or deviates in the direction of least resistance. In either case the vicious result is the narrowing of the nasal passages.

I have prefaced the study of "The Deviated Nasal Septum as an Active Cause in Respiratory Disease," with a study of the various causes which lead up to nasal septal deformities; but in this I have gone quite beyond the limitation of time.

I will therefore omit in the reading the first part, tho I think it the most practical, especially to the practitioner.

#### THE DEVIATED SEPTUM AS AN ACTIVE CAUSE IN RESPIRATORY DISEASE.

We have seen how the deviated septum has come to be and how nasal hypertrophies and large tonsillar tissues, adenoid growths, etc., when they do not cause sep-

tal deformities directly, they are so frequently seen to run parallel with them that we must regard them not only as cognate causal forces, but as either together or separately forming a resultant to produce mouth-breathing. Mouth-breathing seems to the front as a causative force in respiratory troubles; yet the deviated septum is not only frequently the precursor of mouth-breathing, but even in children the direct cause of respiratory disease.

A few Anatomico-Physiological Considerations: Let us see how largely this is true.

In making the deviated septum now a direct causal force we mean that degree of deviation which not only causes more or less nasal stenosis, but that extreme degree which interferes with the proper ventilation of the cavities of the respiratory tract.

A few points in the anatomy and physiology are perhaps essential as the basis of our study. We should not expect an ideal structure; it is essential, however, that we always have at least an ideal naked eye picture in mind. We are helped in this by occasionally seeing a normal structure. Instead, however, of looking at the respiratory tract as a simple straight tube for the passage of air to the lungs, we should ever have in mind an exceedingly complex and most delicate mechanism—a series of organs within organs, every one of which has a distinct and important function, the injury of the least of which, like the Cillia, may set in motion a force which will injure an accessory cavity, a vocal cord, or a lung. But we have time to note only the general principles running through structures and functions. We note first the dual plan; two nasal passages made equal in size by a straight partition, two maxillary, two sphenoid, two frontal, two sets of ethmoid



and two ear cavities, two faucial tonsils, often a bifurcated pharyngeal tonsil and uvula; two arytenoids, two false and two true vocal cords and two lungs. The respiratory tract is thus practically bilateral throughout, each identical in structure and function.

One nasal fossa is like the other in its vestibule, in its three turbinals, three meatuses, and the number of its side cavities, ducts, vascular and glandular supply.

Now, the nasal septum being our viewpoint in this study, the chief feature of this bilateral arrangement is that the unilateral structures have respectively the same relation to the nasal septum in form, size, distance and function.

The turbinals are the same in size on each side of the septum and both the same distance from it, and so the accessory cavities. Each nasal fossa then has the same form and size, each the same number of square inches of lining. Thus a line drawn to the nasal septum from each Eustachian orifice from each middle ear from each corresponding cell of the lungs would be of equal length.

This bilateral correspondence and equality of all the structures with relation to the septum, we know extends far beyond the naked eye study; it is the universal anatomico-physiological principle in the breathing apparatus. Now, the end of all this physiological harmony is to provide nourishment for every cavity, every recess, every pulmonary cell of the vast labyrinthine tract. We recognize the source of nourishment or health as, first, from without—atmospheric; second, as from within—vascular. The first and last requirement is that this harmonious relation of structures and functions should be preserved in order that: (1) atmospheric equilibrium—distribution of air; (2) vascular equilibrium—circulation of

blood, be assured in all parts of the respiratory tract.

We will more fully appreciate the danger to the health and the susceptibility to disease of these parts if we recall the nature and intent of these tissue structures; first, the numerous cavities of the head are open air cavities as really as are those of the chest; second, that nowhere is the physiological function more delicately balanced and nowhere are the structures more highly sensitized.

We need to recall also that the linings of the cavities are everywhere under the double fire of external and internal irritants. The disease forces are upon it from without and from within; on no field does the battle between disease-producing germs and phagocytes rage more fiercely, nowhere need the tissues have such good inheritance of vitality, nowhere is there greater need for the preservation of its integrity.

We know when the inherited quality of the tissues is good, how perfect, how adequate is the equipment of the respiratory tissues even against the ever-increasing irritants of our civilized environments.

Perhaps for our present study we need confine ourselves to the adenoid tissues. This tissue seems a hygienic paradox. In the richness of its blood and lymph supply it constitutes an extraordinary defense against disease germs; in the poverty of its innervation and its over-abundance of lymph substance, it can offer but weak resistance to disease; hence, when the blood and the lymph channels bring to it the irritating impurities of waste substances and the atmosphere carries to it varied material and infectious substances, this tissue can offer but weak resistance. Phagocytosis in *ordinary* adenoid tissue is always sluggish. If then such tissue inheritance has been bad, its

primary catarrhal condition or its ultimate disease is easy and rapid.

Now, not to enlarge the anatomic-physiological basis of study we come to inquire how, if in health, we can best maintain the integrity of the tissues and if diseased we can best aid recovery? Keep the quality of the atmospheric supply pure? Yes. Keep the quality of the vascular supply pure? Yes. These indications are certainly alphabetic, yet unfortunately not in their simplicity. The presence of our complex artificial life makes this compliance well nigh impossible.

From our etiological study we need hardly say that preventing and combating all the diseased forces which make for nasal stenosis and mouth-breathing is an essential necessity in securing that which seems so primary, viz., pure air and pure blood.

#### EFFECTS PRODUCED BY NASAL STENOSIS.

*Immediate.* First, a marked deflection of the septum at once unequalizes the size of the nasal fossae, and changes their symmetrical form; it thus unequalizes not only the volume of air in the nasal passage, but also in the tributary nasal cavities, the middle ear and the lungs.

This may be set forth as a law: That more or less unilateral nasal respiration produces more or less unilateral ventilation of *all* the respiratory cavities. Unequal distribution of air in spite of the law of compensation does occur. On the one hand there will be vacuitous chambers and on the other hand too much air.

In the nasal fossae, the deviation may be such in form and degree that on the concavity side all the cavities whose ducts are impinged upon may become vacuitous. On the convex side, though hypertrophy compensates for a time, the caliber of the nasal fossae which is thus compelled to perform a double work of preparing the air for pulmonary digestion.

Unequal distribution of air then means not only insufficiency of air amounting often to vacuities in the cavities in the immediate vicinity of the septal deformities; but also disturbance of the atmospheric equilibrium of the middle ear and poverty of aeration of the lungs. I think we must regard such disturbances of ventilation existing as they frequently do prior to the sequential catarrhal conditions, primary and very positive disease-producing forces.

#### THE PATHOLOGIC SEQUENCE OF ATMOSPHERIC INSUFFICIENCY.

*Remote.* In a large sense air is a food for the linings of the open air cavities. They are made for atmospheric life. Each cavity has a special function in that it prepares the air for its neighbor further in, so that if the air in its passage is free from irritating matter mucous linings of such cavities can live a normal life.

We know this normal life is interfered with as soon as the air in any measure is excluded. We have the explanation of this phenomena by Bezold: "In all vascular cavities the volume of air diminishes whenever free communication with the atmosphere is interrupted because the oxygen unites in chemic combination with the blood and the amount of  $\text{Co}^2$  given up is not sufficient to compensate for the loss in volume." In this clinical picture we have no doubt the beginning of the pathologic process.

The naked eye picture begins with *hyperemia ex vacuo*—diminished atmospheric pressure, rarified air; hyperemia, congestion, effusion, and beginning with the *deviated septum*, intra-nasal pressure, nasal stenosis constitute the closed doors to the open air cavities; not only is the atmospheric food excluded, but these intra-nasal obstructions themselves interfere with the equilibrium of the nutrition by interfering with the normal blood supply.

The hemorrhoidal hypertrophy of the posterior ends of the inferior turbinals often caused by the deviated septum, is a conspicuous illustration of hypernutrition; the shrunken turbinals on the side of the pressure bulge are examples of a weak nutrition.

Without further example it will be seen how the deviated septum creates a most vicious nasal segment in the pathologic circle in interfering with local nutrition from both external and internal sources. It will be seen also how the entire anatomico-physiological law of the circulation of air and blood in the nasal passages is violated.

We know now definitely the normal routes of the inspired and the expired air through the nose and we know the paramount necessity of their preservation. A vicious circle is at once begun when the inspired air is turned from its normal course through the middle meatus and forced to enter through the inferior meatus; or when the expired air is forced in the face of obstruction in the inferior meatus to pass through the middle meatus.

In this connection we need simply note that the openings to the tributary cavities are in the middle meatus, where they can secure the air supply from the fresh inspired current. How the immediate effect of paucity of air or simple inflammation passes over into the remote effects, chronic inflammation, in the nasal passages, will perhaps be sufficiently clear if we now briefly note the pathologic sequence of atmospheric insufficiency in the ear and lungs.

#### THE MIDDLE EAR.

In the study of disease of the middle ear we need but carry these principles a step further and see the workings of the same pathological law in the presence of the violation of the same anatomical and

physiological principles of air and blood supply.

Perhaps, however, of all respiratory air cavities the tympanic air has the most delicate pressure balance. The least disturbance of the post-nasal air equilibrium need but be *continued* to cause a serious disturbance of the middle ear equilibrium and we have the first causal condition of most forms of middle ear disease, indeed, the subsequent conditions are the historic ones of the various catarrhal conditions of the ear; the disturbance of the equilibrium of tympanic air soon means an unventilated tube, unventilated tympanum because that means a catarrhal tube, a catarrhal tympanum, which makes tempting pathway for infectious germs and the shut-off unventilated catarrhal tympanum and antrum their ideal breathing place.

#### THE LUNGS.

The truth of the principle which follows in the cavities of the head stand out clearer because we have the naked eye evidence. The effect of nasal obstruction and poverty of air are the more readily recognized both by patient and physician because the pathologic process is on the surface and usually more immediate in its effects. The operations, however, of the pathologic forces are in all respects the same in the lower respiratory tract in point of structure, physiological function and disease process.

It is, perhaps, not so clear how unilateral nasal respiration produces unilateral pulmonary respiration or even insufficient aeration. The subject of unilateral nasal respiration or even a nasal stenosis to a degree of confirmed mouth-breathing is seldom conscious of any serious disturbance of the atmospheric equilibrium in the lungs. However, it is rational to conclude from our study of the dual structure and functions of the respiratory tract that respiration is harmoniously and



sympathetically bilateral throughout the *entire* tract; that there is corresponding respiratory sympathy between lung and nasal fossa. This sympathy may be and no doubt is, small, yet is delicate, and thus not too small to be seriously disturbed in delicately organized individuals, or in others in whom the disease process above tends to descend or has already reached the lungs. The findings in clinical observations, too, are sufficiently numerous to confirm this, viz., where the lung corresponding to the side of nasal stenosis is the one most frequently affected. We need not, however, this evidence to prove the viciousness of the deviated nasal septum.

It is sufficient to know that it destroys that delicately balanced equilibrium or distribution of air throughout the lungs, and results in an *insufficiency* of air—the base of most of those pathological processes which are termed compensations—nature's remedial measures—but are in themselves diseased conditions, e. g., "pigeoned breasts" in children, and emphysema in adults, etc.

In view of the etiological and pathological processes already presented, we can fairly see how compensation occurs. The general processes in case of insufficiency of air through nasal stenosis is perhaps like this:

The tidal air, or in chemical terms the oxygen, the pulmonary blood food or respiratory stimulant, falls off to such a degree that the respiratory mechanism is compelled to extra energy to get the required amount of oxygen which the blood demands. Respiration becomes deeper and more rapid. But just as the nostril in the case of one-sided stenosis becomes by exhaustion from the double work put upon it, atrophied, its wings collapsed, so

does the chest either first enlarge and ultimately contract from the extra labor, the respiratory muscles exhaust, the elasticity of the lung tissue weaken, and as a final anatomico-physiological condition there is a dilation of the bronchials and vesicles, and a consequent increase of the residual air, which now is more or less impure from faulty areation. Neither sufficient oxygen is reaching the cells nor sufficient  $\text{Co}^2$  is given off.

In some cases in which compensation does not occur at all, no such contraction or atrophy ensues from precisely the same causal forces, which induced compensation in others; such simply do not have the extra energy required for compensation; poor respiratory nutrition begins and weak vaso-motor action follows, and catarrhal conditions and diseases complete the vicious pathologic circle.

It would now be quite easy to trace out the workings of these pathologic processes to the end, in the lungs and cavities of the head, as we have done somewhat in detail in the ear. We have seen how poor and unequal distribution of air in itself creates poverty of nutrition, local and general. It is sufficient, however, to know that from this general condition proceed the various infectious and catarrhal diseases of all the respiratory cavities.

This does not mean that all these diseases have their origin in the deviated septum. Many we know do not. We only claim for it a very large influence in the pathologic circle in many of the respiratory diseases. If we chose to substitute other forms of nasal obstruction as adenoids, enlarged faucial tonsils, nasal polypi, etc., then we can, I think, well make the claim much larger. These other forms of obstruction can, indeed, in most instances in this study take the place of the deviated septum and the pathologic

sequence would be the same, from the fact that they are all component causal forces of mouth breathing.

#### CONCLUSION.

The object of this study has been to give the proper place of nasal septal deformities in the circle of pathological forces which produce mouth-breathing and consequent respiratory diseases. This purpose has, however, only been accomplished if the study has brought into clear light the *signs* by which the guardian of the family health can note the beginning of those respiratory diseases caused by atmospheric insufficiency through the various forms of nasal obstruction.

For, perhaps, more than in any other specialized line of work the family physician needs to know those signs to enable him to use those measures which really stand first in medical practice, viz., the prophylactic work.

However the specialism of the future may be constituted the work of prevention will, I believe, rightly remain with the practitioner. In this instance, then, the work of the general practitioner is to see the causative signs of disease and prevent the formation of the vicious circle. He stands ever in the presence of these deformative forces at a time when they are most active. The practitioner, however, has a right to look to the specialist for special teaching; and when the vicious circle has been described, the family physician and the specialist should work together to break it up. Happily, in many of these cases more than this can be done both in childhood and adults. It is not unusual to see, through the correction of septal deformity, recoveries from various forms of respiratory diseases.

#### OCULAR HEADACHES.

By E. W. STEVENS, M. D., Denver.

Like the discovery of the circulation of the blood, the recognition of eye-strain as a cause of headaches and other neuroses belongs to no one age, country or person. In the minds of every one the circulation of the blood is invariably and justly associated with the name of Harvey. The discovery of the circulation, however, like all great discoveries, was not made by one man alone. With the name of Harvey must be associated the names of Erasistratus, Galen, Servetus, Caesalpinus, Malpighi, Aselli, Rudbeck and Bartholinus. Little by little the great truth of the circulation was gradually established by many observers.

The credit for the discovery of the cure of headaches, sick, chronic, nervous or migrainic by the correction of eye-strain, also belongs to no one man. It was a gradual evolution growing out of the observations of Sauvage, Piorry, Young, Ware, Beer, Bowman, Leibrich, Von Graefe, Helmholtz, Donders and many others.

Great credit belongs to two American physicians, Mitchell and Thomson, who in a series of articles published in 1874, 1875 and 1876 pointed out the importance of a proper understanding of the subject, and these articles can today be recommended to any physician desiring something new and practical on the question. An extract from one of Mitchell's papers must be quoted: "My conclusions have plainly enough taught me that hardly any men in the general profession are fully alive to the need of interrogating the eyes for answers to some of the hard questions which are put to us by certain head symptoms, since many of the patients treated successfully by the correction of optical defects never so much as suspected that their eyes were imper-

fect. What I therefore desire to make clear to the profession at large is: (1) That there are many headaches which are due indirectly to disorders of the refractive or accommodative apparatus of the eyes; (2) that in these instances the brain symptom is often the most prominent and sometimes the sole prominent symptom of the eye troubles, so that, while there may be no pain or sense of fatigue in the eyes, the strain with which they are used may be interpreted solely by occipital or frontal headaches. (3) That the long continuance of eye troubles may be the unsuspected source of insomnia, vertigo, nausea and general failure of health. (4) That in many cases the eye trouble becomes suddenly mischievous owing to some failure of the general health or to increased sensitiveness of brain from moral or mental causes."

Thirty-two years have passed since Mitchell's first article was written, and yet the subject of ocular headaches is still under discussion. Truth is slowly and painfully attained in all great bodies, whether scientific, social or political, and the medical profession has been slow to comprehend the far-reaching effects of eye-strain. Fifty years after Ambrose Pare's death the French surgeon plied his cautery complacently for the control of arterial hemorrhage and today many headaches, due to eye-strain, go on from year to year, the cause unrecognized.

The following case is given as an illustration of what every oculist sees almost daily: Mrs. S., aged 27, consulted me on account of headaches which had come on when she was nine years of age. At that time her physician, after treating her for some months without improvement, informed the parents that the headaches would end with the onset of menstruation. Menstruation occurred at twelve years of age, but the headaches continued. The opinion was given that

the headaches would cease after the patient had married and given birth to a child. The patient married at nineteen years of age and one year later gave birth to a child. The headaches still continued, and in fact became worse. There seemed now no hope for relief except from the menopause. An examination of her eyes under homatropin and the correction of three quarters of a dioptré of astigmatism in each eye brought complete relief.

During the last thirty years fact after fact has been established by a host of competent observers to warrant the broad generalization that after eliminating such obvious causes as organic brain disease, chronic renal disease, disorders of the accessory sinuses of the nose, anemia, increased arterial tension, errors of diet and toxemias arising from faulty metabolism, as well as poisons introduced directly into the system, eye-strain is the commonest existing cause of headache in the otherwise healthy. It may come on at any age, but is very frequent from six to twenty years of age, and again with beginning of presbyopia, from forty to forty-five years.

Ocular headaches may be unilateral or bilateral, frontal, temporal or occipital, and are indistinguishable in character and position from headaches due to any other agency.

False and misleading is the ground taken by a class of conservatives in the profession who admit that headache is sometimes due to eye-strain, but limit the application of the principle to the most obvious cases eliminating cases, in which there is no blurring of vision, no congestion of the conjunctiva, or pain in the eyes, and those cases in which a refractive error cannot be demonstrated by crude tests without a mydriatic.

The etiology, pathology and treatment of migraine has been made the subject of extended investigation and much polemic



discussion. The evidence now seems to be conclusive that paroxysms of migraine are less frequent and of less severity after the relief of eye-strain. Eye-strain in these cases is probably superimposed upon an inherent predisposition, but notwithstanding this fact the adjustment of proper glasses does more for their relief than any other treatment. Whenever a young or middle aged individual has been subject, since childhood, to frequently recurring headaches, either frontal or occipital, sometimes unilateral, with or without nausea or vomiting and with or without ophthalmic phenomena, the suspicion that refractive error is the existing cause of the trouble should not be dismissed on account of the statement that the headaches are a family characteristic and are not directly connected with overuse of the eyes. The headache and frown are relieved in such cases so often and to so marked a degree by the proper adjustment of glasses that little weight can be given to these arguments (Walton).

One argument often advanced against eye-strain causing migraine must be taken up in detail, namely, the fact that glasses have been already tried without relief. These cases have consulted an ophthalmologist, and failing to find relief have been assured that the headaches are not due to the eyes and cannot be relieved by glasses. In such cases it will often be found that the glasses have been prescribed by some one who has failed to give the proper correction. There is no scientific work that requires more experience, tact, delicacy of perception and patient attention to refinements of detail than refraction. It will often be noted, too, that when glasses have failed to relieve headaches that they have been used only on occasions, that eye-glasses, not spectacles, have been worn, that no care has been taken in keeping them properly adjusted, that the glasses have not been prop-

erly centered. In addition, therefore, to the numerous technical difficulties, there are many common-place reasons why glass fails to give relief, any one of which may suffice, but several of which are likely to exist at some time. I have seen more than once simple change from eye-glasses to spectacles work a miracle. Very few noses are so formed that eye-glasses will maintain all day the proper position desired for the correction of astigmatism.

The occasional use of glasses is a very frequent cause of their non-efficiency, for complete rest is impossible for the uncorrected imperfect eyes even while looking into distance.

In cases of astigmatism a very slight deviation of the glass will produce headaches in a susceptible individual. In view of these facts, the statement that correction of refraction has been given a thorough trial does not carry much weight in many instances.

There is a form of headache often seen by the oculist and for which glasses are frequently prescribed in which the constitutional tendency so dominates the picture that even if eye-strain exists, it is of minor importance in the etiology and its treatment is uniformly unavailing. I refer to the so-called constitutional headaches to which Walton has particularly directed attention.

This variety of headache is often diagnosed as migraine but is quite different from it. It is most likely to appear during adolescence. The patient is perhaps a young woman who has passed through a comparatively robust girlhood, but who lacks the stamina and vitality necessary to carry her into womanhood in the same plane of health, and to enable her to assume with comfort and care the duties and responsibilities of adult life. Such a patient may take up the burden notwith-

standing the handicap or she may fall at this time into the invalid or hypochondriacal habit.

Among other symptoms such a patient gives prominence to headaches often described as nothing short of torture. The pain is apt to be vaguely localized, perhaps affecting the whole head, perhaps vertical, at times it may be migrainoid in character.

Such a patient on examination may exhibit astigmatism, but the most painstaking correction proves unavailing. It is not unusual, in fact, for such patients to pass through the hands of the gynecologist and rhinologist for undoubted uterine and nasal defects, but without avail. These cases have, I believe, done much to further skepticism regarding reflex symptoms in general.

These cases should be recognized by the oculist and before relief is promised from glasses he should learn to note the fussiness of the constitutional neurotic, shown for example by complaints of the temperature of the room, the call for a fan, a glass of water, or the closing of a window. If the visit is accompanied by frequent reference to notes setting forth the analysis of the patient's gastric juices and her urine the oculist should recognize the confirmed hypochondriac for whom other than mental treatment is sure to prove unavailing. (Walton.)

If spectacles are provided these patients complain of the reflection from the glass, and the distress caused by the bow on the ear.

From this class Christian Science secures its greatest triumphs.

In a large number of cases of headache it is impossible to say whether the symptom is due to eye-strain or not until a careful study of each individual case has been made. The diagnosis must be

chiefly based on the detection of errors of refraction, and accommodation, and disturbances of the balance of the extrinsic ocular muscles.

No symptom has received more off-hand diagnosis and off-hand treatment than headache. It is too often the old story of the crying baby and the soothing syrup. There is a sure remedy always at hand. It is on every dressing table and on the show case of every soda fountain. Scarcely more scientific is the ground taken by a class of enthusiasts who find in eye-strain not only a potent, but a curable factor in the production of headache, epilepsy, chronic mental disturbances and nutritional disturbances, local as well as general, and in glasses a panacea for all of these ills. The diagnosis of the cause of recurring and chronic headaches requires a most thorough, sustained and systematic examination of the patient physically, as well as the close scrutiny of his family and personal history. This means that the broad knowledge and sound judgment of the family physician must be often supplemented by the technical skill of the specialist, both working together.

#### Discussion.

Dr. F. R. Spencer (Boulder) had recently seen a man with headache and tenderness over the frontal region. Examination of the eyes showed a hyperopic astigmatism of 0.75 D. An examination of the nose revealed a deviated septum and large inferior turbinal with polypi. Glasses, and operation on the nose, had completely relieved the headache, but some was felt if he left off the glasses.

Dr. George F. Libby (Denver) found among one hundred consecutive cases requiring the correction of refractive errors, selected at random, that fifty complained of headache, ten of headache with nausea, and three of nausea alone. He always felt best pleased when the patient came after having received the careful

attention of his family physician, who had thus removed or excluded other causes of headache, leaving only the ocular cause to be considered. We should bear in mind that this general care was needed after the proper adjustment of glasses. The patient must be led along the road of right living.

Dr. Melville Black (Denver) had noticed, with regard to headaches of nasal origin, one condition as being often responsible for them. This was a swelling of the mucous membrane of the septum opposite the middle turbinated body. It was not a very great swelling. It was in the nature of a tumefaction or turgescence. It was readily indented with a probe and recovered rather slowly. In a few instances the swelling was hard. Its destruction by the use of the actual cautery gave relief to the patient.

With regard to migraine, so much had been written that there was little new to be said. We might place on record our individual experiences, or place ourselves on record as for or against what Dr. Gould chooses to term "New Ophthalmology." I have suffered five attacks of migraine, all of which were preceded by scintillating scotomata, half blindness, numbness of hands and feet and aphasia, then came the pain in one temple. These attacks have absolutely nothing to do with my eyes. They have invariably followed an attempt on my part to correct a constipated habit by taking some mild laxative at regular intervals. Autoinfection has certainly been the cause in my case. Migraine in many cases is due to the eyes, but it is absurd to say that the eyes are the sole cause. Such extravagant statements bring ridicule upon our specialty. We see many cases who suffer from attacks of sick headache at regular intervals, and have so suffered since childhood, and continue to suffer as long as they live, despite the fact that the eyes may at one time have been the cause, and had the refractive error or muscle balance been corrected early in life, a cure would have been effected. But the neurotic habit once fixed, and the cycle established, treatment is very ineffectual. I do not mean to disclaim against correction of any existing error or refraction, for it may do a great deal of good and even effect a cure. It is, however, more likely to fail.

I am willing to acknowledge that I have been careless about learning from children if their headaches are sick headaches or simple headaches. I realize now that this has been a mistake, since I would have many more mi-

graine cures to add to my collection. For several years I have been very careful to learn the nature of the headaches, and to follow up migraine cases, and I have been well pleased with the results of the correction of refractive errors in children and young adults.

Dr. F. H. Welles (Grand Junction) reported a case of nasal headache occurring in a child aged six, that had just entered kindergarten. The headache was more marked in the frontal and occipital regions. Examination disclosed some nasal stenosis, and hyperopic astigmatism 1 D. Correction of the error of refraction gave some relief, but after three months the child returned with epileptoid seizures, occurring from five to fifteen times a day. On no day was it free from them. The seizures began with a distinct aura, consisting of stiffness of the tongue and muscles of mastication. On consultation with Dr. H. R. Bull, no cause for the seizures other than the nasal condition could be discovered. On removal of the border of the middle turbinal, he was surprised to find in the center of the septal tumefaction a linear ulceration, while the turbinal mucous membrane was completely gone over the free border which left the bare bone pressing on the septum. There had been no headache and no other symptoms since the operation ten months ago.

Dr. J. R. Robinson (Colorado Springs) said that his experience in squint ran in parallel lines with that of Dr. Foster. He found that cases of congenital amblyopia did not have squint. When he found a deviation of the eye it was due to a defect in refraction. These cases needed early and careful attention to avoid having the eyes become amblyopic from non-use.

Dr. Robert Levy (Denver) found it often difficult to absolutely exclude nasal causes for headache. Noticeable intra-nasal pressure was not always essential. One very prolific cause for nasal headache which was not generally recognized was a mild catarrhal ethmoiditis, the only manifest sign of which was found in a slight swelling of the anterior end of the middle turbinal, the mucous membrane over which showing slight polypoid change. Upon casual inspection such nasal cavity might be regarded as normal. After excluding other causes for the headache one would be justified in removing the anterior end of the middle turbinate, and in many instances marked benefit would result.



*REPORT OF A CASE OF ACUTE  
SUPPURATIVE OTITIS MEDIA  
AND MASTOIDITIS, OPERA-  
TION; THROMBOSIS OF THE  
SIGMOID SINUS, OPERA-  
TION; EXCISION OF THE  
INTERNAL JUGULAR;  
RECOVERY.*

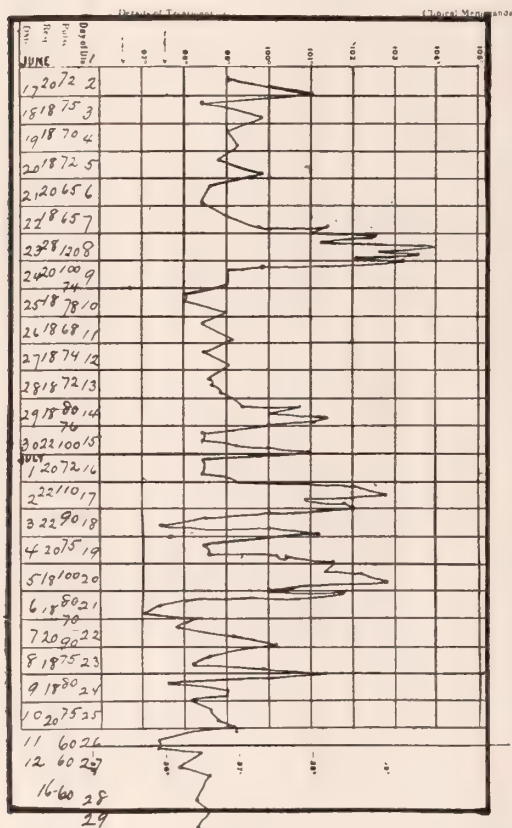
By WILLIAM C. BANE, M.D., Denver.

The case that I report for your consideration is one of interest owing to the severity of the inflammation and the complications that developed.

C. M. R., aged 19, called June 12th, 1905, having suffered with severe pain in the left ear, mastoid and side of the head for two days. The left membrana tympani was dull, inflamed and bulging. A mixture of cocaine, menthol and carbolic acid was dropped into the ear, and after half an hour the membrana tympani was freely incised. A 5 per cent. solution of eucaïne B. was ordered to be instilled into the ear. Sodium salicylate in ten-grain doses every four hours. Calomel and a saline were also ordered. Ice poultice to be applied to the mastoid. On June 13th at 4 p. m. the patient came to the office. He had slept very little the night previous. The ice poultice gave partial relief of the pain in the mastoid. Pulse 112, temperature, 102.3° F. There was a free discharge of bloody serum from the ear. The mastoid was quite tender. Additional cathartic was ordered. Patient was advised to remain quiet at home. June 14th. Pain in the mastoid continues. Pulse 90, temperature, 101.7°. Discharge of bloody serum, very free. Ice poultice was continued. June 15th at 2 p. m., pulse 72, temperature 100°. No diminution in the mastoid tenderness. Dr. Foster saw the patient in consultation at 4:30 and advised a freer incision of the membrana tympani, including the upper and

posterior wall of the canal. The incision was made at 7:45 p. m. under somnoform administered by Dr. Sharpley. On the morning of June 16th the pulse was 78 and the temperature, 100.3°. Tenderness in the mastoid unchanged. The discharge from the ear was very free. An examination of the discharge revealed streptococci in abundance. At 6 p. m. pulse 80 and temperature 101.7°, respirations, 25. Hearing with the right ear dull. No diminution of the tenderness in the left mastoid. Operation was advised and the patient was sent to the hospital the same evening. The next morning (June 17th) the mastoid was entered with the Russian perforator, and the pneumatic cells removed with gouge and sharp spoon. The cells were gray and contained some pus. The sinus was not exposed. The cavity was cleansed with carbolized water and interrupted sutures inserted, without tying to the two lower ones. Owing to involvement of the right ear, the membrana tympani was freely incised before patient came out of the anesthetic. The right ear discharged freely for three days. There was some tenderness of the right mastoid for two days during which time an ice poultice was kept applied. The ear was irrigated with boric acid solution and a 25 per cent. solution of argyrol instilled. By the fourth day the ear was quite dry and the mastoid free from tenderness. The packing was removed from the left canal and mastoid wound on the third day following the operation. There was very little secretion on the packing. On the morning of the fifth day the gauze was again changed and it was found to be moist, but apparently no pus on it. The ear was dry. The mastoid wound was pale in appearance. The patient complained of having had some pain in and back of the ear dur-

ing the night; pulse was 65 and the temperature  $99^{\circ}$  at 7 a. m. The bowels had not been moved for two days. A cathartic was ordered. All of the stitches but the lower one were removed and the latter was tied. Gauze moistened with a 25 per cent. solution of argyrol was loosely packed in the wound. The right ear was free from pain and discharge. As the mastoid wound did not



appear active enough, a request was made that the temperature be taken every hour. By 1 p. m., the temperature had gone up to  $101^{\circ}$ , and at 3 p. m. it was  $101.4^{\circ}$ . As the temperature had dropped to  $101^{\circ}$  by 9 p. m., an order was left that it be taken every three hours during the night. At 7 a. m., (June 23rd) the pulse was 72 and temperature,  $101.1^{\circ}$ . The packing was changed. No edema existed about the wound. The stain of the argyrol con-

cealed any paleness of the tissues. By 10 a. m., the pulse was 80 and temperature  $101.4^{\circ}$ . At noon a very severe chill occurred, when the temperature rose to  $104^{\circ}$ . Dr. Foster saw the patient in consultation at 12:30 p. m. There existed tenderness on pressure along the lateral sinus and over the internal jugular; also some swelling over the jugular. The temperature was taken every hour until 7 p. m. It had gradually dropped to  $101.8^{\circ}$ . The pulse fluctuated from 94 to 120. At 5:30 p. m. Drs. Lyman and Foster met me in consultation. The tenderness over the vein was unchanged. No ocular changes were manifest. Operation was decided upon.

At 8:30 p. m., Dr. Lyman exposed the sigmoid sinus for one and a half inches and then incised it. The sinus was filled with a firm dark clot. Dr. Lyman then, at the writer's request, exposed, tied off and excised the internal jugular from near the clavicle to above the facial branch. The neck wound was closed over a strip of iodoform gauze that had been placed along the floor of the wound and out at the lower angle. Returning to the sinus, it was then freely opened and all the clot down to the bulb removed. No active bleeding occurred. Next, the clot extending backward in the sinus was removed, when free bleeding followed. Iodoform gauze was inserted in both ends of the sinus, a large piece in the mastoid cavity, and a narrow strip in the antrum. The next morning at 7 o'clock the pulse was 100 and the temperature  $99.8^{\circ}$ . By 9 a. m., the pulse was 88 and the temperature  $99^{\circ}$ , and they varied but little throughout the day. The patient had rested well during the night. On the third day following removal of the internal jugular Dr. Lyman removed the gauze from the neck

wound and the packing in the mastoid cavity was changed, but that in the sinus was not disturbed until two days later. There had been very little secretion, no odor, and the wounds appeared healthy. For five days following the sinus operation the pulse varied from 68 to 88 and the temperature from  $98^{\circ}$  to  $99^{\circ}$ . On the sixth day the temperature rose to  $101.4^{\circ}$ . Some pus was found in the upper and lower angles of the neck wound. Every alternate stitch was removed and iodoform gauze inserted in the angles of the neck wound. The following morning (June 30th) the temperature had dropped to normal, but rose again to  $101^{\circ}$  at 6 p. m. The packing was changed and the stitches removed from the mastoid wound. Some pus was removed from the lower angle of the neck wound. There was some swelling in the occipital triangle. The temperature returned to normal and remained so throughout the next day, but on the following morning (July 2nd) at 7 o'clock the temperature was  $102^{\circ}$  and the pulse 110. By noon the temperature was  $102.8^{\circ}$ . Some pus was removed from the granulating surface in the mastoid and some necrotic tissue from the lower angle of the neck wound. Patient was given 10 gtt. of tinct. ferri chlor., 3i of infusion of digitalis and 1-30 gr. of strychnin every four hours. On the tenth day following the sinus operation the temperature dropped to  $97.4^{\circ}$ , but rose again to  $101.2^{\circ}$  by 7 p. m. The wounds were quite healthy, except the lower angle of the neck wound contained a membranous exudate. It was cleansed with a 1-1000 solution of alphozone. On the eleventh day at 7 p. m. the temperature was up to  $101.6^{\circ}$ , and did not drop below  $100^{\circ}$  during the night, but gradually rose to  $102.8^{\circ}$  by 1 o'clock of the next day (July 5th). The pulse was then 96. After consultation with Drs. S. D. Hopkins and Lyman the patient was given 20

c.c. of Stearn's streptolytic serum. Crede's ointment, 3ss, was ordered byunction twice daily. Five hours after the administration of the serum the temperature had gone down to  $100^{\circ}$ . It rose again to  $101.8^{\circ}$  in two hours, then gradually went down to normal and remained there for thirty hours. On the sixteenth day, at 8:30 p. m., the temperature rose to  $101.4$  when 20 c.c. of streptolytic serum was given. The following day the temperature came down to normal and remained close to normal for the next four days, when the patient was discharged from the hospital. The neck wound had been dressed by Dr. Lyman invariably, and it was closed on July 12th, the day the patient was taken home, and the twentieth day after the excision of the internal jugular. Fourteen days from the time the patient was taken home the mastoid wound was closed. By August 22nd, patient had regained his normal weight. Hearing with the left ear was then 25-60. The first week in December, 1905, patient reported at the office in excellent health, with hearing of 46-60.

*Remarks.*—The early invasion of the mastoid and the persistence of the high grade of the inflammation in spite of active abortive treatment is rather unusual. The use of the ice poultice on the mastoid for five days, without an abortive effect, is longer than is considered wise by some aurists, yet I have frequently used it for four and five days with very satisfactory results. The question might be considered whether the long continued use of the ice poultice tended to increase the inward extension of the inflammation and involvement of the sinus. The findings during the operation on the mastoid did not impress me that the ice poultice had done any damage.

The pale appearance of the wound and the tissues covering the mastoid on the



fifth morning after the operation led me to believe that something was wrong, hence I directed that the temperature be taken frequently. The subsequent developments confirmed my suspicions. The symptoms of involvement of the sinus were so typical that delay in operation did not seem justifiable. The findings confirmed the diagnosis. The excision of the internal jugular might have been deferred until the test for return flow from the bulb had been demonstrated. However, as it turned out, there was no return flow, indicating probable involvement of the petrosals. The elevation of the temperature almost daily from the sixth to the seventeenth day following the removal of the thrombus was manifestly due to sepsis from the neck wound, though it may have in part been due to absorption from the petrosals. The administration of the streptolytic serum apparently aided nature in overcoming the sepsis. As yet the surgeons are not a unit in favor of excision of the internal jugular. In fact, statistics indicate that about as many patients get well without excision as with it.\*

#### Discussion.

Dr. C. B. Lyman: The case reported by Dr. Bane was not especially remarkable from a surgical standpoint. The internal jugular vein was dissected out from the clavicle up, and the sinus cleaned out. Of the two methods of dealing with sinus thrombosis, ligation of the vein and excision, he believed that the more radical procedure should be the procedure of choice. With it there was absolute certainty of shutting off the focus of infection. With simple ligation the certainty is not absolute.

Dr. J. M. Foster (Denver) had found the case one of great interest. When it was first seen he was impressed by its extreme virulence. The patient seemed to be exceedingly sick. While it is proper to try to abort the case and

avoid operation in these cases, we cannot expect to do so in a large proportion of them. At the time of first consultation the temperature had not shown marked fluctuation; and even immediately preceding the operation upon the sinus and jugular there had not been the sudden rise and fall of temperature that one expects in these cases. The temperature had risen to 104 degrees and 105 degrees, and although it was taken every hour during the day it had shown no sudden drop. Considering the high temperature, the tenderness running backward along the torcular portion of the lateral sinus and the swelling and tenderness along the sterno-cleido-mastoid muscle, it was the unanimous opinion to operate immediately, and the results showed how imperative it was. In Denver we see quite a number of mastoid diseases, but this was the first case that had come under my observation that required excision of the jugular. Some men in the East have their cases while other conferees found them their cases while their conferees found them very much less common. I was called to Buena Vista shortly after this case occurred, and was relating the experiences I had had with it, when Dr. Cochems, of Salida, told me he had had two cases where he ligated the internal jugular, and showed me the living examples of his curative skill.

Dr. T. J. Gallaher: During the last few years the advancement in the surgical treatment of the complications of otitis media suppurativa has been most gratifying. The successful surgical treatment of thrombosis of the intracranial sinuses and internal jugular vein is being done quite often. The aural surgeon must always be ready to meet these complications. Although infection of the lateral and sigmoid sinuses usually occurs secondary to mastoiditis, yet in children it must be remembered a primary jugular bulb thrombosis is by no means rare. Quite a number of such cases have been reported by McKernon during the last year and a half. When the thrombus has extended into the internal jugular vein the vein should be completely resected after ligation as well as all thrombosed tributary veins. The jugular should be ligated as near the clavicle as possible, always below the omo-hyoid muscle. Although the clot may be contained in the upper end of the vessel the infection extends much below it. The wound in the neck is best treated as an open one. Tenderness along the jugular or lateral sinus is not of much diagnostic value. When tender-

\*Transactions of the 11th Annual Meeting of the American Laryn., Rhinol. and Otol. Soc., 1905, page 71.

ness is present in the neck, Bezold's mastoiditis must be eliminated. The symptom par excellence indicative of sinus thrombosis occurring as a complication of acute suppurative otitis media is the peculiar temperature range. Within an hour or two the temperature may go to 104 or higher and as rapidly drop only to rise and fall as abruptly again. The temperature in suspected sinus thrombosis should be taken carefully every hour or two, lest this peculiar range will not be detected. After the clot has been removed the bleeding from the torcular is best controlled by Whiting's method of introducing the wedge or gauze between the sinus wall and the skull, the rest of the sinus not being packed. The bulb however, should be carefully packed with a strip of iodoform gauze. On opening the sinus, pressure should be made upon the opposite jugular, to increase the pressure in the thrombosed sinus and assist in the expulsion of the clot, as well as to prevent aspiration of septic material to the opposite side. The lateral and sigmoid sinuses and bulb should be most carefully investigated. The opening in the sinus wall should always extend above the emissary vein and superior petrosal sinus, lest the bleeding might come from these sources and a clot still remain above them in the lateral. The diagnosis of sinus thrombosis is only certain when the vessel has been opened and investigated, and experienced operators never depend upon the use of the hypodermic syringe or the appearance or feel of the vessel, for most obvious reasons. In all cases of suspected sinus thrombosis the vessel must not only be exposed and macroscopically examined but it must be opened.

Dr. J. R. Robinson (Colorado Springs) had recently met a case of this kind without so favorable a termination. There had been no symptoms of mastoid involvement up to three weeks after the acute otitis. Then the temperature suddenly rose, although there was no tenderness or bulging into the auditory canal. Operation was advised. At first it was refused, but after a few days consented to. At the first operation it was thought that the boy's condition did not justify the opening of the sinus, although Dr. Patterson, who saw the case, did not acquiesce in this opinion. The next night there was a chill, with tenderness along the jugular. The sinus was opened, but on account of the patient's condition, the jugular was not ligated. The patient lived three months, but died of multiple abscesses of the cerebellum.

Dr. Robinson was convinced that in any case of middle ear disease that continued beyond the usual time, we should open the mastoid and explore the sinus. This works better than to farther delay.

Dr. Robert Levy (Denver)—In an experience of many cases of mastoid disease, he agreed with Dr. Foster that but few involved the lateral or sigmoid sinus. He had seen two in which the most frequently discussed questions regarding this subject were brought prominently before him. There are two considerations of greatest importance, first as to the diagnosis, second as to the ligation and excision of the jugular vein. Concerning the diagnosis it is definitely established that the temperature range is the most important diagnostic feature. The pulse is of little importance and the pain of still less. If other indications of sepsis, such as chill or sweating are also present one may be very certain of the diagnosis of sinus thrombosis and should not merely advise, but should urge operation. The temperature curve is often subject to modification from the typical. It may continue to rise and drop suddenly after the original source of infection is fully removed. This is often confusing because due to secondary sources of infection, which are, however, of less importance.

In a case recently seen, the mastoid was opened and no disease found except a soft spot of necrosis in the *tegmen antri*, the roof was completely removed, the dura found thickened and covered with granulations, which were cleaned away. Recovery did not occur as expected, and a chill, followed by temperature of 102.4 occurred two days later, followed by another chill and high temperature after three days. Sinus thrombosis was found with softening and liquid pus. The sinus was carefully curetted towards the torcular until free bleeding was established and downward to the bulb. Although this was thoroughly done, bleeding from below was not re-established. In this case it was decided not to tie the jugular, and the patient made a complete recovery.

In determining whether the jugular should be tied and excised, one must take the existing conditions into consideration. Each case should be studied separately as a case unto itself; and one's judgment at the time of the operation should be influenced by the condition of the patient, the character of the thrombosis and the local manifestations.

Dr. J. A. Patterson (Colorado Springs) called attention to the improvement in Dr. Bane's case following the use of streptolytic serum. In Dr. Robinson's case he thought the man would not have lived so long, had it not been for the use of the anti-streptococcic serum of which (Dr. Robinson stated in response to a question) 300 cm. had been used.

Dr. F. N. Cochems (Salida) had seen two cases. One occurred in a man of sixty, who had suffered from tuberculosis and chronic otitis media. An acute inflammation supervened, and he was operated on for mastoiditis, and his temperature became normal. Severe pain occurred in the side of the head which, with a slight chill and slow cerebation; led to the thought of deeper involvement. The jugular was easily recognized by palpitation, feeling like a cord in the neck. He tied the vein below, curetted as high as possible, and found in the sigmoid sinus a solid clot, and in the lateral sinus a softer clot. From the latter free bleeding occurred. The patient recovered. The second patient came with marked involvement of the mastoid and sinus. The hardened jugular was pointed out to and recognized by his assistants. He opened the vein and cleaned out the mastoid and lateral sinus. In this case the infection was streptococcic; in the first case probably due to the staphylococcus.

Dr. W. C. Bane, in closing the discussion, stated that in his case there was no pain over the mastoid, which had been thoroughly cleaned out before; but there was tenderness along the course of the internal jugular, and for about an inch wide over the course of the lateral sinus.

### *SOME POINTS PERTAINING TO THE HYGIENE OF THE UP- PER AIR PASSAGES.*

By C. E. COOPER, M. D., Denver, Colo.

It is not within the province of this paper to enter extensively nor to discuss in detail the hygiene of the upper air passages, but rather to elucidate and bring to your notice some of the harmful influences associated with what might be termed, the conveniences of civilization.

Prophylaxis is the highest achievement in the art of medicine, because through

its efforts humanity is spared much suffering and privileged to enjoy an increased longevity. Realizing that one of the chief objects of this section is the encouragement of preventive medicine and the dissemination of its teachings, I feel a great honor in being able to address you.

In many instances, the workers through whose efforts we are enabled to live in surroundings most conducive to our comfort and esthetic sensibilities, have overlooked the essential nature of the human, who was intended to live among the beauties and hardships of nature, and have gradually abstracted us from our intended habitats until we find ourselves under artificial conditions, barricaded from our natural environments and fed modified food, air and drink. What happens? Nature rebels.

That we live in an age of pulmonary troubles, I think all will agree, equally so, that we suffer greatly from pathological conditions of the mucous membranes. When considered together, the latter, especially that of the upper air passages, becomes worthy of more than a passing interest.

In our dry climate, where the relative humidity is low that function of the nose and pharynx devoted to the moistening of inspired air is, through excessive use, highly cultivated and at the same time most easily disturbed because the demands made upon it are frequently so great that nature is unable to respond. Add to this the deleterious influences incident to the method of house heating, namely, hot air heat, and we have to contend with an artificial condition more destructive to our mucous membranes than those of our natural surroundings.

As is easily demonstrated in physics, the quantity of aqueous vapor in the air is dependent upon the temperature, or



in other words the higher the temperature of the air the more aqueous vapor or moisture will it contain. Therefore, starting as we do in Colorado, with a very dry air, heat the same to 300 or 400 degrees by means of a furnace and then send it to our living rooms to be inhaled, and during its inhalation to be moistened by the delicate mucous structures of the upper air tract in preparation for its reception, is it any wonder that the various forms of dry inflammation should be so universally present?

W. Freudenthal<sup>1</sup>, has conducted some very interesting experiments bearing on the amount of moisture furnished by the upper air tract to inspired air. He shows that a normal nose and pharynx in New York, gives off about 500 grams of moisture in twenty-four hours. In Colorado it would have to give more, because of the low relative humidity. This is also in accordance with his experiments, in which he proves that not only does the normal nose and pharynx supply the necessary moisture for inhaled air, but in addition, when he used perfectly dry air, made up for the loss of the natural moisture extracted and supplied as well the 500 grams.

Another feature connected with hot air heat, is that when air is subjected to a temperature such as is present in the air warming chamber of a furnace, the ozone is modified. This accounts for the stale flat smell in furnace heated houses and is easily perceived by comparing the outside and inside air after an electrical storm.

It has been my experience, that we frequently find a return air shaft in many houses for use in extremely cold weather. This is nothing more than a shaft which returns the once heated air of the house back to the furnace for further heating. Thus, in addition to its

first drying process, it undergoes another and another, etc., until either the weather moderates, permitting the introduction of a fresh supply, or the occupants of the house develop headaches, drowsiness, etc., from the added CO<sup>2</sup>, and are forced out of doors by nature's demand for a few breaths of pure air.

The pernicious effect of the furnace is practically shown by the increase in the number of patients suffering with dry catarrhs occurring simultaneously with the advent of winter.

"It is likely," says Denke, "that when locally the amount of the water evaporation is much augmented, the supply of water lost toward the surface cannot go on quick enough, and as a consequence of this, pathologic changes of these parts may result. The portions of the body thus situated are the superficial mucous membranes, which, on the one hand, are constantly exposed to the external air, and on the other, from direct communication with the respiratory passages."—(Freudenthal.)

At first, nature supplies the required moisture by an excessive secretion of the mucous glands which demand an increased blood supply and therefore a hyperaemia of the mucosa and erectile structures. This, when prolonged, becomes permanent, and from the irritation and congestion produces an altered structure and secretion, which latter exists as crusts and scabs and adds insult to injury by acting as a foreign body and increasing the irritation; the whole resulting in a connective tissue hypertrophy, glandular destruction and eventual atrophy and contraction. Such changes require a prolonged time, and we have as intermediate stages, periods of increased discharge, not necessarily secretion, which popularly term the condition catarrh.

It appears quite reasonable to me that our artificially overdried air is a great factor in the production of the common cold. While in such an atmosphere, our peripheral capillaries are in a state of dilation, a sudden change of temperature produces a too sudden shock, followed by a vaso-constrictor stimulation. A reaction then occurs, swelling of the erectile tissues associated with a profuse secretion takes place, mouth breathing and moisture hunger are present, sneezing from the irritation, cutaneous function interfered with or suppressed, increased work thrown upon the eliminative internal organs, headache from the accumulated products which are normally secreted as also from the general congestion, and we enter upon the state of cold in the head.

It is common knowledge that repeated acute attacks lead to chronic congestions.

Attempts have been made to isolate the micro-organisms productive of the cold. Such has not thus far been demonstrated. There is no question but that certain coryzas are etiologically micro-organic, i. e., those associated with the acute infectious diseases. The bacillus of Cautley is still under investigation.

No possible doubt can exist regarding the influence of tobacco on the upper air passages, especially when inhaled. Who does not know the cigarette cough from its associated chronic laryngitis? Mere mention is all that is necessary, for it has become almost universal. Lewis S. Somers<sup>2</sup> says that smoking is worse than chewing or snuff using, because of its local irritant effect as well as from the nitrate of potassium used in curing. In addition the absorption of nicotine acts as a nerve depressant. Snuff users are common suffers from anosmia.

Another factor in alcohol, acting both directly by irritation and indirectly

through its production of gastritis, atheroma, Bright's and hepatic cirrhosis. The vomitus of an alcoholic as well as a non-alcoholic gastritis is quite irritating to the pharynx and frequently responsible for an original pharyngitis or the aggravation of a pre-existing one. Bosworth says, speaking of chronic pharyngitis: "Intemperance is another frequent source of the affection under discussion." Again, he says, "we frequently meet with cases in which a most annoying and distressing throat catarrh is largely due to an existing dyspepsia and in which relief can only be reached by treatment of that disease."

It is quite the usual thing in America to tickle our palates at the expense of our general system. Such is shown by the chronic congestions of the mucosa of the upper air tract which occur in association with hepatic, renal and intestinal disturbances and the accumulation of products the result of incomplete oxydation and unfinished metamolism.

Certain occupations in which the inspired air is laden with small particles of solid matter as dust or contains irritant fumes, produce chronic inflammations. The prophylaxis is obvious.

Misuse of the voice through overstrain, or its use in poorly ventilated and dusty atmospheres leads to a disturbance in intonation, first of purity and then of intensity. This is of no meager importance from the fact that the number of those who depend for their living upon the voice is growing larger daily and there is but little opportunity for the average person to learn even the rudiments of its proper use and care.

The frequent neglect of the toilet of the mouth fosters the multiplication of micro-organisms and is an occasional source of pharyngitis.

Congenital malformations, obstructions to respiration, e. g., hypertrophies, de-

flected septa, adenoids, spurs, etc., are all productive of abnormal conditions resulting in mouth breathing and its evil effects. The necessity for their correction or removal is quite apparent. It is interesting to note that in the cases experimented upon by Freudenthal, one boy with adenoids gave only 57.6 grams of moisture in twenty-four hours and one week later, after their removal, gave 342.72 grams for a similar period.

In conclusion, the conditions that occur in association with the acute infectious diseases are too well known to you all to be dilated upon. Obviously the hygiene and prophylaxis of the general infection is equally applicable to the air passages.

#### Discussion.

Dr. Carmody: I think there is practically nothing that can be said of the paper of Dr. Cooper's except to commend it. I have been thinking a great deal along these lines. Our civilization, as it is called, in these times is not very high because the conditions which we have confronting us in civilized life are much worse than in savage life. As to the air being warmed, the cold air, of course, we know can be warmed very readily in breathing through the mouth, and Kayser has proven in his experiments that the air can be warmed after tracheotomy within half a degree of what it is by passing through the nose, but the important point is not filtering out the dust and particles which pass through the mouth, which would be filtered out if they passed through the nose. The irritant properties of dust, etc., striking against the back walls of the pharynx, tonsils, etc., we all know cause injuries to these structures, the moisture, of course, being taken up from tissues that are not provided with enough moisture to give it off to the air, but only for their own economy. The moisture is taken more from the teeth, the lips, gums and tongue, and produces the cracked condition of the teeth and the conditions we find in the mucous membranes of the mouth, and on the tongue.

Also we have the appearance of the dulness

in the cases of mouth breathing. We notice that in the case of adenoids and hypertrophied tonsils. That is due to lack of fresh blood supply to the anterior lobes of the brain. The air passing through the nose is filtered and the air pressure forces the stagnant blood out of the ethmoidal veins in the upper part of the nasal cavity and allows fresh blood to come in, so that we have a good supply of blood to the brain, while in mouth breathers we have not, and we get the nonoxygenated blood.

Dr. Mitchell: There is one thing I would like to ask Dr. Cooper to dwell upon: as to the hygiene of the upper air passages, how we may guard against taking cold. There are a great many of us here who take cold if the wind blows in our direction, and the hygiene of the upper air passages, I think, should be discussed. I should like to know what he has to recommend to guard against colds.

Dr. Taylor: Is there any further discussion? If not, we will ask Dr. Cooper to close.

Dr. Cooper: The question of how to avoid taking cold is one of increasing the resistance of the body by the use of cold baths, cold plunges, not too warm clothing, as well as not too cold clothing, remaining in the open air as much as possible, remaining out of dust-laden air, and the general betterment of the hygienic condition, or increasing the resistance to sudden changes of temperature, I think is the principal way of avoiding taking cold. As it is, we live indoors in warmly heated houses, we go out of doors without the addition of much extra clothing, and when the cold draft strikes us it is too much of a shock. If we were accustomed to lower temperatures, then on a change of temperature we would not notice it. The cold I have now I got getting out of a warm bed and going into a cold operating room. Had I been accustomed to sleeping in a temperature far less than the one in the room I occupied I don't think I would have contracted the cold.

As regards Dr. Carmody's discussion, I might say that the source from which moisture is gotten in the nose and pharynx is principally the naso-pharynx. Freudenthal used some experiments in which he showed that most of the moisture that was given to the air was given by the naso-pharynx; that the nose didn't have much to do with it; that the erectile structures in the nose were principally for the purpose of warming the air, and that the moisture was gotten through the vault of the pharynx especially.

<sup>1</sup>J. A. M. A. November 9, 1905.

<sup>2</sup>Penn. Med. Jour. July, 1906.

<sup>3</sup>Diseases of the Nose and Throat.



# *IMPORTANCE OF EARLY RECOGNITION AND TREATMENT OF SQUINT.*

By JOHN M. FOSTER, M. D., Denver.

This paper will be largely devoted to the consideration of convergent unilateral strabismus, as this is the form by far the most frequently seen by the physician and one that requires skilled attention to produce results.

The diagnosis of squint to the laity and to the general practitioner at times is fraught with some difficulties. The variety known as "occasional" squint is often overlooked and at times the condition is confused with those deviations of the eye caused by paralysis of one of the ocular muscles. A true squint is in no way related to paretic muscular troubles, the movements of the eyes are not curtailed in any direction and while one eye deviates the deviation remains constant in all directions. Unilateral squint, or where one eye squints constantly, should be differentiated from the alternating squint, where first one eye deviates and then the other, for there is a great difference in prognosis between these two varieties. The former demands immediate and skillful attention to save the vision in the deviating eye from being lost, whereas in the latter variety (the "alternating" form), the vision is maintained in each eye by the fact, that first one eye is used for a longer or shorter period, and then the other. Therefore, in the "alternating" variety vision is preserved with no treatment, whereas, in the unilateral, sight in the deviating eye is lost from non-use.

The aetiological factor in the production of squint other than those cases caused by corneal opacities, etc., has been a matter of discussion for a number of years. Various theories have been, and are still held as to its causation. It was formerly thought that the com-

PELLING factor, was simply a weakening of one muscle, frequently combined with too great strength of its opponent. Donders taught that the principle cause was errors of refraction. The hypermetropes have convergent squint, and the myopes divergent. He justly claimed that the hyperope had to use a large amount of his accommodation to see distinctly at a distance, and when attempting to see near objects required an abnormal amount of accommodation. In this way in near work the hypermetrope used an excessive amount of accommodation, and as this is assisted greatly by convergence this faculty is used to its utmost, often enough to not only bring the eye to fixation, but even turning still further, thereby causing an inward deviation. Worth, while he appreciates much of the logic of Donders' theory, yet feels that the essential cause of squint is a defect of the "fusion faculty," and therefore, considers that errors of refraction are remote or predisposing rather than the proximate cause of squint. When we consider the small proportion of squinting eyes to the great number of hyperopes in children, we are compelled to give this theory very serious attention, appreciating, too, that Worth has given more time and seen more cases clinically than probably any other man in the world; and his results have been almost extraordinary considering what his predecessors had done before him.

Cases of squint should receive the earliest possible attention after the child is noticed to be a squinter. These cases frequently occur about the second year of age, just at the time when the child begins to pay especial attention to near objects, such as toys, pictures, beads and other small objects that then assume an importance in its life and ideas. To one who is not familiar with these children the rapid deterioration of vision in the

squinting eye will often be astounding. Just as soon as one eye deviates from fixation just so soon is diplopia developed. This is not only very confusing and annoying to the child, but renders its safety for navigation so doubtful, that the mind promptly causes the vision in the deviating eye to be suppressed; thereby relieving the child of the annoyance of double vision. This eye, in a unilateral squinter, is frequently the one with the greatest error of refraction; and consequently is the one that has the dimmest sight; and perfectly naturally, if the vision is to be suppressed in one eye, it will be in the poorer one. The "suppression" in these cases is constant; there never being a time when the deviating eye transmits the impression of form that is carried to the brain through this apparatus. Naturally these delicate nerves soon lose their power of transmitting vision from non-use; and a blindness supervenes which is generally known to the profession as "amblyopia ex anopsia." At times after only a few weeks these unused eyes lose much, if not all, practical vision; and when the fixing eye is occluded by a hand, a card or any other dense media it will be found that the vision in the squinting eye has been reduced to perhaps large objects, counting fingers at a few feet or even to perception of light.

First the amount of deviation of these eyes should be carefully ascertained and recorded. Any number of methods have been suggested ranging from rather indefinite, to much more accurate methods of examination. The measurement by marking upon the lower lid with ink the position of the corneal edge upon each eye during fixation; and then during deviation; the use of the perimeter; or Mr. Worth's method of reflections from the cornea in a darkened room with candles, are a few examples of many

methods of testing the deviation. We all find that after a time the special method that seems to us to be most applicable and gives us the best results; is the one we adhere to in practice. Whatever method is used, an exact record should be made and kept for future reference, so that as the treatment progresses, we are able to compare the status of the case from time to time.

After one has convinced himself that there is no paralysis of the ocular muscles, and there is a deviation of one eye which does not alternate, the child should have prompt and skillful attention. First, the refraction should be carefully looked into. Formerly it was almost impossible for us to ascertain the exact refraction in a child eighteen months of age or thereabouts; for we could not rely upon our ordinary methods of subjective examination, the child being too young to answer questions or to take enough interest in the proceedings to give us a definite idea of what it really saw. In later years, however, this has been rendered a matter of comparative ease and great accuracy in the use of the retinoscope. These children's eyes should first be put thoroughly under the effects of atropia, thereby completely paralyzing the accommodation. This should be used in both eyes and the refraction carefully demonstrated by the retinoscope. When we have ascertained the exact refraction by this means, glasses should be immediately prescribed and worn constantly even by the smallest children. One usually selects a glass somewhat weaker than the amount of hyperopia shown by the retinoscope, say from a quarter to a half a diopter less. We find we can use much discretion and judgment as to the kind of frames, the length of bows, the methods of retaining them in place, etc. Considerable ingenuity can be exercised in this matter on young children. It seems

best to me to give these children only one pair of glasses to be worn constantly, rather than a weaker pair for distance and a stronger pair for near; because if there are two pairs frequently one is lost, or even if both are at hand, there may be considerable time during which the child is without any glass, caused by neglect in replacing the second glass after the first has been removed. The child, too, will accept gratefully the full correction while it is fully under the atropia.

The second plan in the treatment is in the use of atropia in the fixing eye; with emphasis strongly upon the *fixing eye*; for if it is used now in both eyes it entirely defeats the object for which it is employed; that object is, to compel the patient to use the deviating eye for fixation for near work at least. In this way we are often enabled to increase and maintain what vision there is in the bad, deviating eye. An exception to the rule of the use of atropia in this stage is in those few cases in which the correction of the error of refraction and use of the proper glasses causes the squint to entirely disappear and binocular vision again be restored. Last February two children were brought to me aged three and seven respectively of the same family; the older child having had unilateral convergent strabismus in the left eye since its fourth year. Retinoscopy showed nine diopters of hyperopia in each eye. The boy, aged three, had been noticed to squint in the right eye for the past year. Retinoscopy showed six diopters of hyperopia in each eye. Each of these children were greatly disfigured by the squinting, and candidly I felt that they would both have to come to operation. After the use of atropia until there was paralysis of the accommodation, full correction was prescribed

for each child, and immediately the eyes became straight and have remained perfectly so up to the present time. These cases occur only exceptionally and can by no means be relied upon as ordinary results.

The method of using a *blinder* over the fixing eye, thereby compelling the use of the deviating one is also largely used, but in my experience it has been far inferior to the use of atropia. It should be remembered, too, if atropia has been used continuously for a prolonged period by the family, the child being under the care and attention of the physician, that often the sight of the formerly good eye will deteriorate in the same proportion that the bad eye improves; and when the patient is next brought to the attention of the physician he will find that the condition has changed, the formerly good eye is now the bad one, and the eye that was bad is now the good one. This is an illustration to show the necessity for the child being brought to the physician often enough to prevent this occurrence; for our object is to maintain good vision in *each* eye; and not to let it fluctuate from one eye to the other.

So far the treatment detailed has been for the purpose of maintaining accurate vision in each eye and not especially toward curing the squint and straightening the eyes, thereby producing binocular vision. Here we find that we have the choice of several non-operative methods, prisms, the stereoscope and probably the best of all. Worth's amblyoscope. These methods tend to overcome the deviation by strengthening the weaker muscles; and if the case is seen early, accomplish the purpose in a fair proportion of cases. Personally I have not found it wise to promise a cure by these means in practically any case that is presented, for the results are not cer-



tain by any means, and are often very disappointing. These methods of treatment should be tried, and tried thoroughly in every case of squint that presents itself to the physician. These means failing, we have still left the operative treatment, such as tenotomies, advancements and shortening of the muscles. We can straighten the eyes in a very large proportion of these cases so that as far as the cosmetic effect is concerned it is practically perfect; but in those cases where there is quite a marked diminution of vision in one eye, binocular vision is not obtained in more than about one-third of the cases, even though the eyes are rendered practically straight. In children we find it imperative to use general anaesthesia. In adolescence local anaesthesia suffices.

In considering tenotomies we must remember that the internal recti are not only strengthened and shortened, but are frequently retracted; and the opposing muscles are stretched, weakened and partially atrophic. We can readily judge that in a case of this kind a single tenotomy of the internal rectus would not be sufficient. We would be compelled at the same time in order to straighten the eye, to shorten the external rectus. This is either done by advancing the tendon of this muscle or by shortening the belly of the muscle by one of several operative procedures. The author has found excellent results by forming a loop in the body of the muscle corresponding to the result desired thereby not disturbing the attachment of the tendon nor weakening it. In certain cases it is often necessary to divide the procedures between the two eyes, such as tenotomies of each internal rectus, or combined with advancement or shortening of one or both external recti muscles. Much judgment can be used

in determining just what and how much shall be done, care being especially directed toward preventing an over effect. This part of the subject is so large and opinions differ so radically, that the short space allowed for this paper does not permit of but these few words upon the operative treatment of cross eyes.

A final point in the matter of treatment for squint is that the patient and its family must be impressed with the fact that it is absolutely essential that glasses be worn constantly *after* the operation, otherwise they may expect a rather prompt recurrence of the squint.

#### Discussion.

Dr. E. W. Stevens (Denver) thought the paper was an important one to read before a State medical society, for we must reiterate the statement; that we should see these cases of squint early, in order to get the best results from treatment. It was still not uncommon for the parent to be told to wait, that nothing could be done until the child was five or six years old. This was very bad advice. If taken in time, nearly all cases of squint can be banished by proper glasses. There were cases, however, in which the treatment of squint was not so simple. He cited one case in which the child commenced to squint at two years of age. Skiascopy under atropine showed the eyes to be emmetropic. They were kept under atropine for a time, but this could not be kept up indefinitely. The child was too young to practice exercises for training the fusion sense. He gave convex 2 D lenses, tied on, which she could look over at a distance, but had to look through for near vision. In ten weeks there had been improvement, the squint being very rarely in evidence, though the eyes were not under atropine. In some of these cases the fusion faculty never develops.

Dr. E. O. Sisson (Keokuk, Iowa) asked why it had not been practicable to keep up the use of the atropine in this case? Was it on account of the dryness of the throat in this climate?

Dr. Stevens replied that it was on account of the bright light during the summer. The atropine had been kept up for four months, but it was impossible to keep dark glasses on the child, and the atropine caused photophobia.

Dr. W. C. Bane (Denver) found that in not a few cases the early correction of the error of refraction would give relief. If the child had squinted for a number of years, efforts should be made by exercising the muscles for a few months. If this failed we could accomplish nothing more except by operation. His experience with the tucking operation was not satisfactory. He preferred the form of advancement described by Dr. Black; sometimes adding the third stitch in the center of the muscle, attaching it firmly to the sclera close to the margin of the cornea.

### *A CONSIDERATION OF THE PRINCIPLES OF INFANT FEEDING.*

By A. G. TAYLOR, M.D., Grand Junction, Colo.

The great principle which underlies all practical application of the science of feeding infants artificially is on accurate imitation of nature's earliest food for man; and until a thorough knowledge of metabolism in general and that of the infant in particular shall be in our possession no other method exists by which we can expect a rational solution of the question. A correct determination of the different chemical compounds contained in human milk has long been sought for, but to this day no complete analysis has been given us, owing, perhaps, to the enormous obstacles encountered in this composite mixture. However, little by little, the true nature of the composition is being elucidated and, while there is yet a great deal to be demonstrated, nevertheless the facts already in our possession may, with considerable satisfaction, be utilized to formulate certain principles. As we all are aware, this has been done for quite awhile and pediatricists have been able to deduce excellent rules for infant feeding.

It is an accepted fact that the most important formative period of the human being is the first four months of life. It is further obvious that the very delicate embryonal structure of the infant, which

later on acquires wonderful tolerance to harmful agencies, demand the utmost solicitude while beginning to conform themselves to external influences. Of all these influences, none compare in importance to the food supply. The structures of the infantile organs, especially those concerned in digestion and assimilation are capable of dealing admirably with suitable material; but if those presented are not adapted, the consequent strain put upon the whole organism is out of proportion to the powers of resistance and as a result something gives away. The individual is thereby rendered incapable of that marvelous conservation to opposition which otherwise is acquired and reaches a lower plane of vitality than that of which the natural powers are capable.

The only safe, perfect food supply for the baby is the mother's milk, and whoever suggests otherwise does so to the detriment of helpless infants. Unfortunately it is the innocent child who must suffer, not the censurable adult influenced, as a rule, by ignorance. No mother should seek an excuse to neglect that highest of her duties which should be cherished also as her loftiest privilege. Mother's milk for mother's baby affords human food for a human being, and will go farther to solve the distressing problem of a persistently high mortality among babies than all the chemical erudition in the world. The melancholy fact confronts us that one-third of all infants born, die before the completion of their third year, and this fact alone is abundant reason why this subject should, again and again, be taken up. Not alone because the life and well-being of the infant is concerned, but because the adult and generations yet to be born are most vitally influenced by proper feeding of the infant.

It is certainly a refreshing thought to all of us, affording no little degree of

comfort, to know that a great many babies live in spite of bad feeding. However, a realization of this fact affords no reason why any case should be neglected in the least particular. Our profession must demand a closer adherence to nature's method of feeding and in so doing, at least two forces are to be combatted if we would make genuine advances. The first is an alarming disinclination at the present time on the part of mothers to breast-nurse their offspring; and the second is the odious clamor for commercial supremacy in the sale of artificial food; the former condition being greatly encouraged by the latter. When married women wish no offspring and finding themselves mothers, they naturally shirk the vitally important duty of committing themselves to the highest interests of the child. Perhaps false modesty or the pressure of social functions prompts the mother in this course. Allow me to repeat that in this she is abundantly encouraged by the multiplicity of so-called infant foods and the manner in which they are advertised to the public. Her false logic that, whereas only the mother can care for the breast-fed infant, anyone can attend to the bottle-fed, is sustained by the sight of scores of fat babies' photographs used almost without exception by the manufacturers of these so-called foods, and to exploit their supposed merits. Breast-fed children may, or may not, be fat, but the chances are they are robust and fleshy, which is far better. They are not exposed, as are hand-fed infants, to a great many common sources of infection, and when exposed they have greater powers of resistance. Human milk is the most powerful tonic to infantile digestion that we possess; in addition to this, anti-toxic and immune-producing elements are afforded the child.

Diversities of individual circumstances and, perhaps, idiosyncrasies make it nec-

essary sometimes to have recourse to hand-feeding, but the rule should be that while the mother's breast secretes milk at all, the child should have all the benefits to be derived from it. It has been demonstrated frequently that the advantages to the infant of only one breast-nursing in the course of twenty-four hours are too great to be disregarded. Infants having at least this advantage thrive better and grow faster than when wholly hand-fed. In some instances of this nature it is difficult to determine the quantity of cow's milk with which to supplement the nourishment obtained from the mother, but this is generally quite easily overcome and never outweighs the advantages to the infant of mixed feeding. Part breast is superior to all hand-feeding and should be recognized universally. If, for any valid reason, the mother's breast is wholly valueless, let the cow's milk take its place; but previous to such change the mother should receive proper treatment to stimulate, if possible, an adequate flow of milk. We may, with reason, infer that if the medical attention, which early weaning necessitates on the part of the infant, were bestowed on the mother, a fair proportion at least would be enabled to breast-feed the baby and many children would thereby be saved from early graves. We may well remember, when searching for an efficient galactagogue, that nutritious food is superior to drugs, never losing sight of the story of the "queen of the dairies" who broke every record for a large yield of rich milk and who took, in addition to her own allotment of provender, the milk of other cows.

May it be said at this time that it is impossible to lay down fixed rules for infant feeding, inasmuch as each case must be treated by itself, and in this connection the medical man has abundant opportunity to display his ability along the



line of dietetics; moreover, the physician may take to heart the fact that he assumes a distinct and serious responsibility when he assigns any child to a fixed formula. The infants who cannot take care of properly prepared cow's milk are rare indeed. The trouble often comes from the inability of the physician to properly modify the milk so as to make it suitable for the case in hand.

The most important point to be considered in the proper management of bottle-feeding, is to have pure, clean cow's milk. Such milk can be secured only from a reliable dairy in which we are absolutely certain that all modern sanitary provisions are appreciated and carried out. Aseptic conditions should obtain with reference to the cow, to the milker's hands and clothes and to all utensils used in milking and transportation. As soon as each cow is milked, the milk should be passed through an ærator and cooler and bottled immediately in a room free from all bad odors and then kept at a temperature of 50 degrees F., or lower until used. In a word, absolute cleanliness should prevail and when such is the case, boiling, sterilization and Pasteurization will be found unnecessary. These conditions should be possible everywhere and if physicians will insist upon their observance on the part of dairymen, the problem of a proper milk supply will be largely solved.

Nature has ordained for women to feed her baby with raw milk for breast milk is neither boiled, sterilized nor Pasteurized. Imitate nature. We all hear of more or less objection to raw-milk feeding owing to a possible contamination with various pathogenic bacteria; this risk, however, is reduced to a minimum when the principles of modern hygienic measures are insisted upon and carried out.

Having chosen a given food for an infant, the following factors should be noted to be satisfied that it is thriving: First, the baby must appear satisfied after feeding; second, there should be no vomiting; third, no colic; fourth, the bowels should move unaided once or twice in twenty-four hours, depending upon the age of the child; fifth, the infant should sleep from four to eight hours at one time during the night; sixth, the weight of the child should show a weekly gain of from four to eight ounces.

The following given formulæ are suggested as being suitable in a majority of cases of normal infants from birth to eight months of age, at which time a baby should be taking "full" clean milk, fed raw.

First. One part top milk. Three parts sterilized water, including 5 per cent. lime water. Composition:

Proteids .....	0.9 per cent.
Fat .....	2.5 per cent.
Sugar .....	1.1 per cent.

Second. One part top milk. Two parts sterilized water, including 5 per cent. to 10 per cent. lime water. Composition:

Proteids .....	1.2 per cent.
Fat .....	3.3 per cent.
Sugar .....	1.5 per cent.

Third. One part top milk. One part sterilized water, including 5 per cent. to 10 per cent. lime water. Composition:

Proteids .....	1.8 per cent.
Fat .....	5.0 per cent.
Sugar .....	2.2 per cent.

The above formulæ are based on a 10 per cent. milk. In a majority of cases a 7 per cent. milk is to be preferred.

These brief formulæ will, we believe, be sufficient for most cases and will, perhaps, be enough for the general practitioner to carry in his mind. In this connection, I take occasion to refer to the Deming Percentage Milk Modifier, with which you are all, no doubt, more or less

familiar. It is a sixteen ounce graduate adapted for working directly with percentages in the home modification of cow's milk for infants. While this apparatus is not all that could be desired, so far as absolute accuracy is concerned, yet I feel confident that by its use you will feel more sure of your position in dealing with the percentage problem. It is not advisable to attempt percentage modification with the idea of obtaining hair-splitting accuracy. In speaking of minute modifications, Dr. Jacobi was both practical and logical when he pointed out the marked variations in the milk of the healthful mother, not only from day to day, but indeed from morning to evening, and remarked that if the slight alterations and changes in the percentages of modified milk were as dangerous as they are sometimes made out to be, there would not be one living child in all creation. Such an eminent authority as Jacobi and many others have called the attention of physicians to the fact that clean milk is far more important than any amount of modification. Whether you respectively believe in boiling milk, sterilizing it, Pasteurizing it, modifying it or feeding it raw, it must be clean and from a healthy source.

In conclusion, I desire to express gratefulness to Dr. Zahorsky, of St. Louis, for past favors shown me in the work at the Bethesda Foundlings' Home, where many opportunities were afforded in the study of infant feeding. I would also call your attention to an extract from the address of Dr. Hollopeter, of Philadelphia, in the section on Diseases of Children at the late meeting of the American Medical Association, in which he very truthfully says: "There is no more vital touch to national life and spirit than that given by the citizen who has elected for his life work the welfare of the child; and adds, that today the pediatricist possesses a substantial and

growing knowledge of food modification, percentage feeding and accurate adjustment of food to the individual child. This with the increased appreciation among the laity of the laws of personal and domestic hygiene, enable us not only to save the lives of many children formerly helplessly lost, but in addition, to guide them safely through childhood and youth to the ideal type of manhood and womanhood that follows proper nutrition and environment."

#### Discussion.

Dr. T. E. Taylor: I feel it is impossible to put too much emphasis upon the matter of the paper to which we have just listened. When we consider how the low birth rate is, in effect, being decreased by the frightful mortality among bottle-fed babies, it calls for our closest attention and study.

I have been very much pleased with the doctor's paper, and agree with it heartily in the main. I have no doubt the majority of healthy babies would thrive upon one of these modifications of cow's milk, and that is much better for them ordinarily than any of the baby foods. At the same time, I am satisfied that even among what we call fairly healthy babies we will find some who do not thrive. The essayist has said that we must make an individual study of these cases, as what suits one baby does not suit another. That statement is truer of babies than it is of adults, though adults have their idiosyncrasies. In addition to studying other phases of this subject, we must likewise study the stools in babies that are not gaining well. If a baby is gaining flesh, that is sufficient and satisfactory evidence that it is doing well, and we cannot lay too much stress on occasional colic. We see colic among babies nursed at the mother's breast that are thriving and doing well. I think in a considerable percentage of cases of bottle-fed babies we find on examining the stools, numerous curds, even when they are on some form of modified milk. We find the proteids cannot be digested. We know that the proteids of cow's milk are different from those in mother's milk. There is more casein. There is also a difference in quality, so that it is precipitated in harder curds and is less easily digested. Failure of casein digestion is not only indicated by the presence of the

curds, but by the fetid character of the stools, which calls for some further modification.

The doctor has not alluded to the plan which has been spoken of a good deal of late of removing the greater part or all of the casein from the cow's milk by the rennet ferment, and simply using when modified again by adding cream to restore the fats which are also taken away with the casein. I have been trying that plan for the last two years with good results.

About two years ago I had a child, a fondling, adopted in one of my families, which they were anxious to raise, and in which case all of the forms and modifications, highly diluting the milk and trying various baby foods, seemed to fail. The child, instead of gaining, was losing flesh, and my attention was called to an article in the *Journal of the American Medical Association*, by Dr. Frank S. Churchill, of Chicago, and it struck me that the plan he advocated in this article was the thing I was looking for. We tried it with the most gratifying success, in that the curds, which had persisted in the child's stools with whatever form of modification we used, disappeared, and gradually the amount of fat was increased, cream added, and today the baby is a fat and thriving child. The result was so remarkable in this case that the woman who adopted the child told every woman she heard of about it who had a baby that was not doing well, and I know of some other cases that were equally satisfactorily treated. No doubt this plan would not work with all cases, but it gives us a means of removing the casein from the cow's milk for the benefit of those children who seem almost powerless to cope with it.

In a later plan it has been suggested to add citrate of sodaum. I have not had much experience with that, but all of those agents in their place are useful.

Dr. F. Singer: In connection with this discussion on diseases of children, I desire to report two cases in which the mothers developed typhoid fever, and I adopted the plan of having the nurse in charge pump the breasts of the mothers, removing the child from the breast as long as rose spots appeared on the abdomen, and to pump the breasts of these women until the temperature had been normal for seven days during the course of the disease. As a result of this, both children were placed back upon the breasts; the mothers continued to nurse them during their term of in-

fancy, and the results in every particular were satisfactory. These two cases occurred in Pueblo.

I had a case some two years ago in which a woman came to me and advanced as the chief reason for not nursing her child that it made her breasts flabby, and that she was afraid that she would lose her bust. I regard that as a pitiful reason.

Dr. W. T. Little: Infant feeding is largely a matter of details, and often very trifling details, and in my experience I find there is nothing so trying to the physician as these cases of bottle-fed infants for whom no formula can be advised or devised that seems to agree with them. I think the reason that so many physicians fail in infant feeding is because they do not pay attention to the details, and try to diagnose, as it were, the reason for the difficulties. The digestion of casein, as you know, is the problem with these infants who do not thrive. We acknowledge that cow's milk is the best substitute for mother's milk; but the curd is thick and leathery, and while we endeavor to break the curd so that the infant can digest it, we do not always succeed.

The percentage method of feeding which Dr. Taylor touched on, of course, is the proper method when it can be carried out. Dr. Westcott, of Philadelphia, has devised an algebraic formula for determining the proportions of milk and cream, which I have found very satisfactory in the majority of cases, and it seems to me very much easier to use this formula than to try to remember the different proportions of milk or top milk and water and lime water, etc. His formula is this: He first decides on the percentage of cream, or the percentage of proteid or fat which you want to use, and the quantity of milk you want to use for twenty-four hour feeding. He determines the quantity of cream by subtracting the fat percentage from the proteid percentage, multiplying it by the quantity, and dividing it by either 8.2, 12.4 or 16.8, depending upon the cream strength of the milk. Then the quantity of milk he determines by multiplying the total quantity by the fat percentage, dividing by 4, and subtracting by 3 or 4 times the cream. I find this is a very practical method, but there are times when it is impossible with modified cow's milk, or milk modified in this way, or with the addition of proprietary preparations, to so modify or cut the curd that the child can digest it, and I be-



lieve in those cases we have to resort simply to condensed milk. In my experience there are cases now and then that will not thrive on anything so well as condensed milk.

A professional friend of mine who returned from abroad a week or two ago informed me that in London pediatricians are using condensed milk very freely. Whether this is due to the difficulty of getting sterile fresh milk, I do not know. But he said a good many are using it in their desirable practice. It is not confined to slum practice.

The objection to the large amount of sugar in condensed milk, I think, is met by the use of unsweetened condensed milk. The use of modified whey is excellent, and many children can be fed on that, and it would be the first substitute for modified milk. Then, if we fail, condensed milk is the next best thing.

Dr. Herbert B. Whitney: I am very much disappointed that this subject has not had a more general discussion by the members of the society. There is not a man or woman who ought not to be deeply interested in infant feeding.

I want to say a word or two with reference to some points made by the writer in his admirable paper. In the first place, in regard to breast feeding. It has been my experience that mothers are not so much unwilling to nurse their children as unable to do so. I have never met in my practice in Denver a mother who was unwilling to nurse her child. Many of them, however, are not able to do so.

In regard to the modification of milk, a great many authorities have overdone their methods of milk modification by the introduction of algebraic formulae, etc. It is a little bit trying to go back to our schooldays and begin again to introduce algebra into our daily work, and many practitioners hesitate before adopting algebraic formulae in the practice of medicine. However, there are ways of modifying milk that are easier than that, and there are only two or three simple things to be remembered. First, one must know the percentage of proteids and fats in cow's milk, namely, about four per cent. of each. In the second place, he must know the percentage of fat and proteid in mother's milk, which is about  $3\frac{1}{2}$  per cent. fat, and  $1\frac{1}{2}$  per cent. proteid—about two or three times as much fat as there is proteid. A third fact which the practitioner need to know, and he ought to be able to acquire that knowledge in a short time, is the amount of fat con-

tained in top milk. If he knows these three things, he can practice percentage feeding satisfactorily. As to top milk, cream alone contains 16 per cent. of fat; the upper 9 ounces of a quart bottle contains 12 per cent., the upper 16-22 ounces about 8 per cent., etc. Let us suppose that we wish to give a child one month old one-half per cent. of proteid and two per cent. of fat, which is about the relative proportions the child ought to receive. Now the amount of proteid is practically the same in all top milk, whether you take the upper 9 or 16 or 22 ounces, etc. Hence, to get milk containing half per cent. of proteid, you must dilute 8 times, because there is 4 per cent. of proteid in milk; and if you desire at the same time to get 2 per cent. of fat, you must of course have a 16 per cent. cream. Again, suppose I want to give 1 per cent. of proteid and 3 per cent. of fat. To get 1 per cent. of proteid I must dilute four times, and in order to get 3 per cent. of fat the top milk must contain 12 per cent. of fat, which is true in the upper 9 ounces of a quart of milk. If you master these simple facts, you can use any number of continuations, and can easily figure out the amount of top milk which is required. For example, if I wish to give 1 per cent. proteid and 3 per cent. fat, I tell the mother to pour off 9 ounces, dilute 3 times with water, and add a specified amount of sugar (about 1 even tablespoonful of milk sugar to the half pint of food). Let none of us forget that sugar is just as important a part of the milk and food of the child as are fat and proteid.

I can hardly agree with some of the formulae given by the writer. They are defective, in that, in the first place, not enough sugar was contained in any of them, as, for instance,  $1\frac{1}{8}$  per cent. Sugar must reach, at least, 5 or 6, or 7 per cent. In the second place, always remember that fat is a dangerous thing to give an infant in too large quantities. You cannot with safety give 5 per cent. of fat to a child 6 or 8 months old. Holt and others have described cases of fat poisoning, where excessive fat produced the worst forms of disturbance, more so than an excess of proteids. We should be careful about increasing the fat as well as the proteids.

In connection with whey, I can give my testimony to the great value of whey, plus cream, in the feeding of difficult cases. Every practitioner should know the value of whey and utilize it in his practice. One thing must al-

ways be remembered, that is, to heat the whey before adding cream.

I recently encountered a case that had been treated by another physician in which the modification was excellent, except that he had forgotten to instruct the mother to heat the whey before adding cream. Unless you heat the whey to 150 degrees, the minute you add cream you get coagulation of the casein from the rennet left over in the whey. In whey mixtures I use 20 ounces as a basis. If I then add 1 ounce of cream, I get approximately 1 per cent. of fat, 2 ounces, 2 per cent., etc., and this makes it very simple. As has been shown by Rotch and others, whey contains 0.8—.9 per cent. of soluble proteids, so that a child is getting a fair mixture when you give whey, slightly sweetened, plus 1 or 2 or 3 per cent of cream, as the case may require.

While condensed milk should not be wholly condemned, it ought not to go out from this society that condensed milk should be given a child except under unusual conditions, always guarded by cream after the first few days. I believe it is a food of great value in difficult cases. I agree with Dr. Little that we can hardly get along without it in feeding children, where low modifications have been used without success, but it always tends to the production of rickets or scurvy. We should, within a week or two, add cream in the proportions necessary, 1 or 2, or 3, per cent., as the case may be.

Dr A. S. Taussig: I feel that my experience has been about the same as Dr. Whitney's in regard to women who do not nurse their children. We do not find a great unwillingness on their part to nurse their children, but inability to do so. Children that are breast-fed are less apt to have gastro-intestinal diseases than those that are bottle-fed.

There is one point that has not been brought forward with sufficient clearness and certainty, and that is, a child may be fed on breast milk not for the nutrition it receives, but from the immune products that are absorbed from the milk. That has been spoken of in the medical journals, and it should be impressed upon the profession, even though the mother has not sufficient milk to nourish a child. If we can feed a child once or twice a day from the breast and supplement it by the mixtures, we may assist that child in a greater measure than if we attempt to nourish it by the artificial methods alone.

Dr. Taylor (closing the discussion): It is not my desire to take up the further time of the society for the reason that my paper has accomplished its purpose, namely, in arousing a good discussion and in being criticised. I am glad of both.

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"The physician who looks upon his professional training as merely an asset to his commercial value is unworthy the confidence of a human being."—*The Ohio State Medical Journal*.

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CHOREA.—Babinski presented a case of chorea cured by injection of scopolamine hydrobromate.—*La Clinique*.

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"When we cease to worship the city physician as a human God, merely because he is from the city, and cease to regard the country physician as a fool simply because he is from the country, we will be in a fair way to a more perfect organization."—J. B. Norman, *Jour. Missouri State Med.*, Feb., 1907.

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PREVENTION OF APPENDICITIS.—Tyson says that sound treatment should aim at the prevention or cure of appendicitis, the surgical measure being the last resort. The prominent cause being constipation, he strongly approves visits to mineral springs for the washing out of the intestinal canal, this doing much to prevent colitis and appendicitis.—*The Illinois Medical Bulletin*.

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WHEN TO EAT COTTON.—When one by accident swallows an object not intended for eating it is a wise precaution to send after it a quantity of absorbent cotton which has been picked into fine threads and mixed in bread and milk.—*The Illinois Medical Bulletin*.

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A simple remedy for hiccough, the Medical Council reminds us, is that if we cause the patient to sneeze the hiccough often ceases.—*The Illinois Medical Bulletin*.

# Progress of Medicine

## INTERNAL MEDICINE.

EDITED BY

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### RESUME OF THE WORK OF SHARON SANITARIUM.

Vincent Y. Bowditch (*Jour. Amer. Med. Ass'n.*, June 15, '07) gives a summary of the cases discharged from that institution since its inception, sixteen years ago, with valuable comments thereon. Of 327 patients discharged, 160 were classed as "arrested;" of these seventy-nine were discharged previous to February, 1902, and up to that time twelve of them had relapsed and died; since that time six more have died, leaving a balance of sixty-one patients living and apparently in good health 5—15 years from date of discharge. Of the second series, those discharged from February, 1902, to January, 1906, eighty-one were discharged as "arrested," and of these seventy-seven are alive, working and apparently well, three have died and one has not been heard from.

There are, therefore, of the 160 discharged as "arrested," 134 apparently well, and five well at last account but not recently heard from, at the ends of periods varying from one to sixteen years. While twenty-one had relapsed and died.

The total number of cases treated in the institution are not given. He considers these results, in view of the hopelessness of these cases fifteen or twenty years ago, quite gratifying. He deplores "the extraordinary and oftentimes illjudged enthusiasm" for sanitarium treatment which has been running rampant of late years, and thinks there is now a slight reaction against it, because of the claims of the overzealous, but that

we are now entering upon a healthier phase of the subject and can claim a great step forward. He particularly emphasizes the educational effect of such institutions in teaching others how to resist the disease.

His experience with tuberculin is also encouraging. He cites cases that had been in the sanitarium from three and one-half to five months and were either unimproved or growing worse when they were put upon tuberculin and improved rapidly and left the sanitarium in an arrested condition and have remained apparently well for one and one-half to two years. He says he is impressed with its efficacy.

As to the relative value of "home" and climatic treatment, he concludes that while an immense amount of good may be done—more than was dreamed of ten or fifteen years ago—by treatment at or near the homes of patients he cannot sympathize with the extreme views of some who maintain that there is no occasion for sending a patient to another climate. He has repeatedly seen patients improve upon being sent to a mountainous region after a thorough but unsuccessful trial of the sanitarium treatment at home.

He strongly deprecates the habit some have of sending far-advanced cases or those not financially able to receive proper care, away from home. O. M. G.

### MYOCARDIAL DEGENERATION.

Myocardial disease is very rapidly rising to the place of prominence that it so eminently deserves among cardiac affections. While not a few have long been cognizant of its frequency and importance, this has not been generally the case.

Robert H. Babcock (*Amer. Jour. Med. Sciences*, May, '07) discussed the sub-



ject in a most clear and concise manner, its diagnosis and treatment.

There are cases in which the diagnosis rests on good and sufficient data and is comparatively easy, but there are others which must be diagnosed by exclusion or inference.

Old age, syphilis, chronic alcoholism, gout, lead or phosphorus poisoning, are important factors in disturbing the nutrition of the heart and make the existence of degeneration highly probable.

Angina pectoris, an oppressive dull precordial pain or an unaccountable breathlessness or vertigo in a person past 50 years of age—especially if there is hypertrophy or dilatation and arterio-sclerosis—points to myocarditis, but acute heart-strain must always be excluded.

Air-hunger with nervousness and anxiety are not to be ignored. The objective data are more familiar. While arterio-sclerosis is not necessarily accompanied by myocarditis, if it is very extensive and there are signs of cardiac incompetence, as moderate dullness in the first interspace close to the sternum, a ringing and metallic quality of the aortic second sound, with or without the systolic murmur in the same area, and an exaggerated pulsation of the subclavious, exaggerated pulsation of the subclavions, thinned and dilated. Bradycardia is of little significance unless accompanied by the Stokes-Adams syndrome, but tachycardia upon exertion, especially if accompanied by irregularity and arrhythmia, is very significant.

Increase in the deep cardiac dullness is a very important sign where there is no obvious cause. Then there are the more insidious cases in which neither physician nor patient has suspected anything wrong with the heart until sudden death occurs. The breath has been coming a little more difficultly on ex-

ertion, a little precordial distress attributed to indigestion. The character of the aortic second sound is here again of great importance. There is also, generally, a short systolic blowing murmur at the apex, accompanying, but not displacing, the first sound, after exercise. It is due to muscular mitral insufficiency.

Treatment: Rest is of first importance, but to what degree must be determined in each case. Complete rest a long time is not so beneficial as in valvular disease as it seems the heart needs the assistance of the pumping action of the voluntary muscles and diaphragm and the facilitation of the interchange of gases.

Resistance exercises and massage are particularly indicated. Bad-Nauheim baths, either natural or artificial, are very beneficial.

Medicinal Agents: The vasodilators are generally indispensable. Digitalis or strophanthus are often indicated.

Dr. Babcock has overcome his theoretical objections to aconite and thinks highly of it, for the palpitation in some of these cases. Cathartics judiciously used are very valuable, salines are generally best.

Finally, "few therapeutic agents are of as positive value as morphine when properly administered." Small doses, gr. 1-10—1-8, preferably hypodermically, at bed time stimulates the heart and wards off dyspnea. O. M. G.

#### ROUTINE EXAMINATION OF THE EARDRUMS OF CHILDREN WITH FEVER.

W. B. Hoag (*Amer. Med.*, June, '07) quotes both McKernon and Kerley as saying "no examination of a sick child is complete until a thorough inspection is made to ascertain the condition of the middle ear." He reports from his experience as a general practitioner, twenty-six patients with thirty-seven

acute suppurative middle ear cavities, occurring within five months, twenty of the twenty-six being discovered in the course of routine examination, there being no symptoms whatever referable to the ear but simply fever, which could not be satisfactorily accounted for. Every one was incised and made a rapid recovery except one, in which mastoiditis developed.

He emphasizes the fact that if we wait for pain or tugging at the ear the majority will not be discovered until irremediable damage has been done. He thinks that if every practitioner carried a head mirror and set of ear-speculums and used them as routinely as he does his stethoscope, there would be fewer cases of pneumonia that suddenly "resolve" when an ear begins to discharge pus.

O. M. G.

#### SEROTHERAPY IN THE TREATMENT OF GRAVES' DISEASE.

Heineberg (*Amer. Med.*, June, '07) gives a brief resume of the literature upon this subject. The earlier sera were prepared upon the theory that the function of the thyroid secretion is to neutralize certain toxins resulting from metabolic changes and that the symptoms of exophthalmic goiter are produced by hyper-secretion of the thyroid gland. Therefore the thyroid glands were removed from animals—sheep, goat or dog—and when tetany developed the blood was withdrawn and the serum therefrom used, at first hypodermically but later by mouth, to neutralize the excess of thyroid secretion. Considerable benefit seemed to be derived from this treatment, but the results did not seem to be uniform or altogether satisfactory. Later, Beebe, at the suggestion of Rogers, used the precipitated nucleoproteids and globulins from the thyroid gland of persons dying from Graves' disease, to

inoculate rabbits and thereby produce a thyrolytic serum. The use of this serum now seems exceedingly encouraging, numerous reports of cures of great benefit are coming in and at the A. M. A. meeting it was commented on very favorably.

O. M. G.

#### THE END RESULTS OF MY NEPHRECTOMIES: ACCOUNT OF RENAL TUBERCULOSIS.

Israel (*Prager Mediz., Wochenschr.*, No. 21, 1907,):

Of 101 operations account of kidney tuberculosis, there were four nephrotomies, one resection and ninety-six nephrectomies. As a result of the nephrectomy, there were eleven deaths from the operation and ten independently of the operation, three have not been heard from and seventy-two are living and conditions known. The time since operation is between two and fifteen years in forty-five. The report covers weight, strength, bladder function, retrogression of tuberculous disease of the bladder, condition of the urine, condition of remaining kidney, and cause of death. Ninety-four per cent have gained in weight from ten to ninety german pounds, average 37.4. The strength is good in 86 per cent, medium in 5.7 per cent, poor in 7.6 per cent. Before operation 39 per cent were free from pain, after operation 80 per cent. Before operation micturition was normal in 15 per cent, after in 60 per cent. Of those with frequent micturition—two to three hours—before operation, 79 per cent have been restored to the normal, but of those with intervals of less than two hours, only 32.3 per cent have returned to normal, but there has been improvement in 39 per cent. Two patients with bilateral disease have not shown any improvement, and in two patients with unilateral kidney disease with involvement of the bladder, the con-

dition of the bladder has not improved; of the patients with disturbance of the bladder function but without organic disease of the bladder, 78 per cent were relieved by the operation. Of the patients with tuberculous disease of the bladder, the bacilli have disappeared from the urine in 93 per cent, the improvement being gradual and extending over one year or more. The recoveries are in inverse ratio to area involved; limited to ureteral orifice, 75 per cent, one-half the bladder 66 per cent, diffuse disease 31.5 per cent. Disappearance of the bacilli was not always accompanied by return of urine to normal, in many instances the presence of white and red corpuscles continued (mixed infection) neither has a return to normal urine always meant restoration to normal function. Of the patients with normal urine there is disturbance of function in 17.7 per cent with abnormal urine in 61.2 per cent. The causes of disturbance of function with normal urine are shrinking of the bladder walls from healing of the lesions, habit and concentration of the attention on the bladder. The remaining kidney, if healthy at time of operation, usually continues so. One became tuberculous after eight years, due to ascending disease; tuberculous cystitis in a man at 69. Two have suffered from nephritis since operation, but the disease ran a mild course, there have been fifteen pregnancies with two abortions. Of the ten deaths not due to operation, one was from rectal carcinoma, one cause unknown, eight from secondary disease, three from miliary tuberculosis, present at time of operation, one of tuberculous meningitis, one from tuberculosis of the remaining kidney, which was diseased at time of operation, the others of amyloid disease of the abdominal organs secondary to unhealed tuberculous pleuritis and perinephritis

and one of chronic sepsis due to perinephritic abscess and ascending pyelonephritis. The immediate and ultimate results were better the earlier the operation. As spontaneous healing of a tuberculous kidney does not occur and medical treatment is of no value, every tuberculous kidney is an indication for nephrectomy. Evidence that renal tuberculosis may be benefited by tuberculin is accumulating.

BAIRD.

#### NERVOUS AND MENTAL DISEASES.

EDITED BY

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##### CEREBELLAR FUNCTION.

Horsley (Brain Part, CXVI), reviewing the literature in reference to the function of the cerebellum, concludes that all research, ancient and modern, tends to confirm the view of Flourens, Luciani, Jackson and Edinger, that the cerebellar cortex is the first chief station of representation of afferent basis of movements of all the skeletal muscles.

##### CLINICAL SIMILARITY OF FRONTAL AND CEREBELLAR TUMOR.

Walton (*Proceedings Boston Society of Neurology*, Nov. 15, 1906) reports the tumor so far simulated cerebellar tumor that operation in the latter region was concurred in by most of the neurologists who saw the case, in the Massachusetts General Hospital. Early, the patient complained of pains over the right eye and down the right side of the face and neck, loss of vision and vomiting, which commenced more than a year previous to first observation. During the past two months there had been severe and constant pain in the occipital region and back of the neck, with drawing of the head backward, and to the left shoulder, the pain extending to the arm with subjective numbness. Screaming hysterical attacks occurred. Unsteadiness on standing with possibly a tendency to fall to



the right. There was double optic neuritis with marked projection of the disc on the left. The right pupil larger than the left, both reacting to light. The patient's manner was fretful, indicating a change of disposition, which perhaps should have suggested frontal tumor. Primary operation in the sub-occipital region showed a tense and bulging dura. The patient died before the second operation could be undertaken. Autopsy showed rounded tumor-mass projecting into the cavity of both ventricles on each side of the septum lucidum and just anterior to each candate nucleus. These masses were continuous with one another beneath the septum lucidum and just anterior to the pillars of the fornix. The right frontal lobe was largely occupied by dark, soft, spongy, finely reticulated tissue extensively infiltrated with clear fluid (glioma).

[The intimate functional association of frontal lobes and cerebellum was recently referred to in these columns (COLORADO MEDICINE of March, 1907, page 119.). Twenty-five years ago Henoch reported the case of a five-year-old girl who suffering a left hemiplegia which almost entirely cleared up and presented as permanent symptoms, disturbance of speech, change of character with great destructiveness, unsteady and stumbling gait. Autopsy showed the upper right frontal gyre greatly, and the remaining right frontal convolutions somewhat, atrophied. The affected brain substance was translucent and intensely red. The pia above the upper frontal gyre was thickened, white, opaque and adherent to the adjacent encephalon. The brain otherwise was normal. Ten years ago, the writer saw a case in Nothnagel's wards, which had been diagnosed frontal tumor by the first assistant of the clinic, J. Manneberg. Shortly thereafter the

latter changed the diagnosis to cerebellar tumor. The autopsy disclosed a frontal tumor and a disgusted clinician.—Dept. Ed.].

# OPHTHALMOLOGY.

EDITED BY  
E. W. Stevens, M. D.,  
Denver, Colorado.

## TREATMENT OF ULCER OF THE CORNEA.

Edward Stieren (*Penn. Medical Journal*, June, 1907) advocates a less strenuous and more considerate treatment of ulcer of the cornea. Cauterization or stimulation of the ulcer is not to be thought of in the early stages, and too frequent cleansing of the eye has a bad effect on the reconstructive process, and must be looked upon as a meddlesome interference with nature. Stieren has never seen the use of eserine or pilocarpin prevent the iris from prolapsing into a marginal ulcer when it perforates.

The general plan for the successful treatment of ulcer of the cornea consists in cleansing the conjunctival sac thoroughly, keeping it as aseptic as possible, and aiding the cornea in its reparative efforts. The first indication is met by flushing the conjunctival sac with liberal quantities of saturated boric solution. It is rarely necessary to cleanse the eye oftener than twice in twenty-four hours.

Keeping the conjunctival sac as aseptic as possible is accomplished by filling it and covering the lids with 1-3000 bichloride of mercury ointment prepared from the following formula:

Hydrarg. bichlorid, gr. i.

Sodii chlorid, gr. v.

Adeps lanae hydrosi, q. s.

• Petrolati, oz. vi.

The sodium chlorid and bichlorid hydrarg, are dissolved and rubbed up in about one dram of lanolin; the vaselin is boiled for five minutes, the impregnated lanolin added, and, after boiling for five minutes longer, this liquid ointment is poured into jars. After it has cooled

it will be found to be of proper consistency to introduce under the lids.

The eye should be put at rest by thoroughly atropinizing it, applying a comfortable cotton dressing, and keeping the patient quiet in a moderately darkened room. Dusting a small quantity of dionin under the lower lid, after the eye has been cleansed, and before the bichlorid ointment has been introduced, renders the patient more comfortable, and induces a more rapid healing of the ulcer. Moist heat applied to the lids is of benefit in aiding the cornea to throw off necrotic tissue and to assist in new cell growth. It is best applied with cotton pledgets moistened in hot sterile water or boric solution, and should be kept up for one-half hour immediately preceding the cleansing of the eye.

Indolent ulcers and ulcers showing a tendency to spread are best treated with light applications of tincture of iodine. Stieren has for years discarded carbolic acid, trichloroacetic acid, and other strong chemical agents. He uses the cautery in one class of cases only, viz., corneal abscess—a purulent infiltration in the substance of the cornea covered both anteriorly and posteriorly by sound tissue. The liberation of the pus in these cases by cauterization is invariably followed by relief from the severe pain which usually accompanies this complication.

In ulcer of the cornea occurring in gonorrheal ophthalmia or ophthalmia neonatorum, the plan of treatment must be changed, as it is impossible to attain even a moderate degree of cleanliness of the conjunctival sac, and the eye cannot have a dressing applied. In these cases the eye should be kept immersed in a 25 per cent solution of argyrol. Stieren is confident that under this treatment he has obtained better results than when more active measures were employed.

## Constituent Societies

The **Boulder County Medical Society** met in regular session in the Physicians' Block, Thursday, June 6th, at 8 p. m.

The meeting was called to order by the vice-president, Dr. Spencer.

Members present: Drs. Kate Lindsey, Spencer, Shiveley, Jolley, Eva Shiveley, Campbell, and Wood. Visitors: Dr. Evans.

The minutes of the previous meeting were read and approved.

The subject for the evening—"The Detection of Preservatives in Milk" was presented by Dr. W. A. Jolley, who referred briefly to the complex composition of food stuffs in general, and the action of bacteria, yeasts, molds, ferments and enzymes in splitting up the compounds into their elements. That absolute cleanliness will secure a milk, practically germ free, has been amply demonstrated, and that such milk supply is not only possible, but practicable, has also been shown. The explanation of the very common use of preservatives to prevent decomposition in milk lies in the simplicity of its use as compared with the care necessary to secure the same result by cleanliness. When the cleanliness prevails, the number of germs in the milk is enormous; hence the dairyman endeavors to control the situation by adding a preservative, which will inhibit the growth of the germs, but does not destroy them. The addition of such milk to food, in sufficient dilution, removes this inhibition, and the germs multiply with great rapidity. The preservative most commonly employed at the present time is formaldehyde in a strength of 1:5000, or 1:10,000, which is sufficient to prevent the growth of bacteria.

Dr. Jolley called attention to the formation of an insoluble albuminate in the preservatives of some foods, rendering the detection of the formaldehyde difficult. He then illustrated a number of chemical tests for the detection of formaldehyde, explaining the technic carefully, and showing the ease with which it may be detected when present even in minute quantities.

Dr. Shiveley reported a case of *noma* in a patient suffering from Bright's disease, with fatal termination.

Dr. Jolley reported a case of **attempted suicide**, seen with Dr. Trovillion, half an hour after the injection of one-half ounce of chloroform. Recovery was prompt after washing out stomach.

The society adjourned, to meet Thursday, July 11th. LUCY M. WOOD, Secretary.

## New Members

H. H. Harvey, Trinidad; O. J. Whitcomb, La Junta; Laura J. Lane, Rocky Ford; B. K. Ellis, Greeley.

## Items

Dr. T. Mitchell Burns announces that after July 1, 1907, he will limit his practice to obstetrics and diseases of women.

Dr. H. G. Wetherill has returned from an extended vacation, and announces the limitation of his practice to general surgery, gynecology, obstetric surgery and consultations in those departments in the future.

The American Practologic Society, at its last session, held in Atlantic City, June 3-4, elected the following officers for the ensuing year: President, A. B. Cooke, Nashville; vice-president, L. J. Krouse, Cincinnati; secretary-treasurer, L. H. Adler, Jr., Philadelphia; executive council, J. W. Pennington, S. G. Gant, A. B. Cooke and L. H. Adler.

The *Interstate Medical Journal* announces the purchase of the *St. Louis Courier of Medicine*, one of the oldest medical journals in the West and its consolidation with the *Interstate* on July 1. This is the fourth medical journal that has been purchased and absorbed by the *Interstate* during the past few years.

Dr. W. W. Grant, of Denver, was re-elected on the Board of Trustees of the American Medical Association to serve until 1910, at the meeting of the House of Delegates, June 6. The popularity of the doctor was evident in the sweeping majority of the votes he received. Our hearty congratulations, doctor.

The State Board of Medical Examiners held the second biennial election since the new law, July 3, 1907, the following officers being elected: President, George B. Packard, Denver; Vice President, W. F. Singer, Pueblo; Secretary-Treasurer, S. D. Van Meter, Denver. The remainder of the board are D. A. Strickler, C. K. Fleming, C. P. Conroy and T. W. Miles, of Denver; E. L. Sadler, of Fort Collins, and John English, of Pueblo.

Parke Davis & Company announce the election of Mr. Frank G. Ryan as president. There are few men so well fitted for so responsible a

position as Mr. Ryan. His long identification in the ranks of pharmacy, his association with the Philadelphia College of Pharmacy as an instructor, of which college he is an alumnus—and more especially his high personal qualities, so well known to his acquaintances and students, all contribute to his value and worth. The Parke Davis Company are to be congratulated.

The Board of Medical Examiners have inaugurated a campaign against the advertising quacks of the city of Denver.

The licenses have been revoked of the following: Wm. C. Williams, Orvis M. Burhans, M. S. Chenoweth, James R. Mahon, James D. Eggleston, E. H. C. Graeb, O. S. Rhodes, Jerome H. Boyd.

All have appealed from the action of the board upon a writ of *certiorari* except Burhans, who is believed to have left the state.

The board is confident that the higher courts will sustain the action, and as a result, in the opinion of the secretary, "self-styled C. U. specialists will be a thing of the past."

Informations have been filed, recently, for violation of the same statute, against Sereda Callanan, C. D. Fitch, E. E. Zook, Geo. B. Fisher, Edward C. Smith, Prof. F. A. Siegel, F. Lubert and A. J. Amdon.

The silence of the secular press upon these matters is not to be wondered at, when the advertising contracts are recalled to have a decided influence as censors.

## Books Reviewed

**A Text-Book of the Practice of Medicine.** For Students and Practitioners. By Hobart Amory Hare, M.D., B. Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital; Laureate of the Royal Academy of Medicine in Belgium and of the Medical Society of London. Octavo; pp. 1120; with 131 engravings and eleven full-page plates in colors and monochrome. Second edition, revised and enlarged. Cloth, \$5, net. Philadelphia and New York. Lea Brothers & Company, 1907.

In this new edition of Hare's *Practice of Medicine* the general plan of the original work remains unchanged; but some sections have received some valuable additions. The work is well adapted to the use of the student and gen-



eral practitioner, and can be highly recommended.

The treatment of the various diseases is given more attention than in the other well known text-books in medicine. The author's many valuable contributions to the field of therapeutics enable him to condense the most important therapeutic methods of modern times in a clear and concise form. The treatment of stomach disorders also includes indications for surgical intervention, and mention is made of the brilliant results obtained from gastro-enterostomy in well selected cases.

As in the majority of good books, a few omissions may be noted, viz.: no mention of rest is made in the treatment of fever in pulmonary tuberculosis. As a whole, the work is full of good information, strictly up-to-date, and will surely find a prominent place, particularly in the hands of students.

C. E. W.

### Books Received

[All books received will be acknowledged in this column to be recognized by the contributor as the equivalent. Reviews will be made of these volumes according to merit and the interests of our readers.]

**Modern Medicine. Its Theory and Practice.** In Original Contributions by American and Foreign Authors. Edited by William Osler, M. D., Regius Professor of Medicine in Oxford University, England; formerly Professor of Medicine in Johns Hopkins University, Baltimore in the University of Pennsylvania, Philadelphia, and in McGill University, Montreal. Assisted by Thomas McCrea, M. D., Associate Professor of Medicine and Clinical Therapeutics in Johns Hopkins University, Baltimore. In seven octavo volumes of about 1,000 pages each; illustrated. Volume II, cloth. Price per volume, \$6.00, net. Lea Brothers & Co., Publishers, Philadelphia and New York, 1907.

**The Practitioner's Library of Gynecology, Obstetrics and Pediatrics,** in Original Contributions, by Eminent American and English Authors. The Practice of Gynecology—Edited by J. Wesley Bovee, A.M., M.D., Professor of Clinical Gynecology in the George Washington University, Washington, D. C. Large octavo, 836 pages, with 382 engravings and 60 full-page plates in colors and monochrome. The Practice of Obstetrics—Edited by Reuben Peterson, A.B., M.D. (Colo. Med., June, 1907, p. 273). The Practice of Pediatrics—Edited by Walter Lester Carr, M. D., Consulting Physician to the French Hospital;

Visiting Physician Infants' and Children's Hospital, New York. Large octavo, 1,014 pages, with 199 engravings and 32 full-page plates in colors and monochrome. Price, single volume, cloth, \$6.00. Price, any two volumes, cloth, \$11.00. Price, three volumes, cloth, \$15.00.

**Diseases of the Rectum: Their Consequences and Non-Surgical Treatment.** W. C. Brinkerhoff, M.D., Author, Steinway Hall, Chicago, Illinois. Price, \$2.00. Published by Orban Publishing Co., Chicago, 1907.

**International Clinics, A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, etc.** By Leading Members of the Medical Profession Throughout the World. Edited by W. T. Longcope, M.D., with the collaboration of W. Osler, M.D., J. H. Musser, M.D., A. McPhedran, M.D., and others. Vol. II, Seventeenth series. Cloth, pp. 307. Price, \$2.00, net. Philadelphia and London. J. B. Lippincott Company, 1907.

**The Principles and Practice of Dermatology.** Designed for Students and Practitioners. By William Allen Pusey, A.M., M.D., Professor of Dermatology in the University of Illinois; Dermatologist to St. Luke's and Cook County Hospitals, Chicago; Member of the American Dermatological Association; with one colored plate and three hundred and sixty-seven text illustrations. Octavo, cloth, pp. 1021. price, \$6.00. New York and London. D. Appleton & Co. 1906.

**The Practice of Obstetrics.** By American Authors. Edited by Charles Jewett, M.D., Professor of Obstetrics in the Long Island College Hospital, Brooklyn, N. Y. Octavo, pp. 786; third edition, revised and enlarged; illustrated. Cloth. Price, \$5.00 net. Lea Brothers & Co., New York and Philadelphia.

**Progressive Medicine, Vol. II, June, 1907.** A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, 381 pages, with illustrations. Per annum, in four cloth-bound volumes, \$9.00; in paper binding, \$6.00; carriage paid to any address. Lea Brothers & Co., Publishers, Philadelphia and New York.

# COLORADO MEDICINE

PUBLISHED MONTHLY BY THE COLORADO STATE MEDICAL SOCIETY.

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Annual Subscription, \$2.00.

Single Copies, 20 cents.

All communications to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are typewritten.

Communications and items of interest are invited from all parts of the state. Death notices, removals, changes of address, etc., are especially desired.

Secretaries of the County Societies are earnestly requested to report their meetings, including the subject matter of the papers presented, and in general, the substance of the discussions.

Marked copies of local newspapers, or clippings, containing matters of interest to the profession will be gratefully acknowledged. The name of the sender should be given.

The journal will be issued on the 15th of each month. All copy must reach the editor not later than the first of the month. Advertisements of proprietary medicines will be accepted provided the preparations advertised have been approved by the Council of Pharmacy and Chemistry of the American Medical Association. Address all communications regarding advertising to

JAMES M. BLAINE, M. D., *Adv. Mgr.*, 3-4 Steele Block, Denver, Colo.

## IMPORTANT NOTICE.

All members of the Colorado State Medical Society are entitled to a copy of this journal each month. Failure to receive the same, and change of address, should be promptly communicated to the editor.

VOL. IV.

DENVER, AUGUST, 1907

No. 8.

## Editorial Comment

### THE PROGRAM FOR THE GLENWOOD MEETING.

The programs have been mailed. If you have not received a copy, it is because the mails have miscarried. In presenting this program the Committee on Scientific Work have no apologies to make, for the reason that they feel that none are needed.

The program is thoroughly representative of the best talent in the state. The subjects are alive and up to date, and should excite the fullest discussion.

We are to have the pleasure of listening to an address by Dr. William J. Mayo of Rochester, Minn., who was last year honored with the presidency of the American Medical Association, and who is so well known to the medical profession that he should need no introduction. We were especially fortunate in getting Dr. Mayo to attend this meeting as the guest of the

society, and we believe that his address alone will repay you for your attendance at the Glenwood meeting.

We will have two guests from Salt Lake City, Doctors Niles, president of the Utah State Medical Society, and Tyndale. Their names are to be found in the section program. We all know them and know of their ability professionally as well as socially. If you have not met them, do not wait for an introduction; a slap on the back and a hand shake will do.

We have hoped to have Dr. J. N. McCormack with us, but so far we have been unable to learn if he will be able to come. Dr. McCormack has been doing splendid work for the American Medical Association in the way of assisting state societies in organizing constituent societies, but more especially in his public addresses to lay and professional audiences. We still hope to hear that Dr. McCormack will be able to come.

It is to be hoped that every one will select from the program a number of pa-

pers and be prepared to discuss them. It is the discussions which serve to develop the papers as well as to make the meeting a success from a scientific standpoint. The object of issuing the programs a month before the meeting is to give everyone an opportunity to prepare himself for discussions. Everyone who reads a paper feels that he has been slighted if his paper receives no comment. So put yourself in the other fellow's place and come prepared to prevent the feelings of anyone from being hurt.

MELVILLE BLACK,  
Secretary.

### *IF NOT, WHY NOT?*

The report of the subscription department of the A. M. A. contains some interesting figures regarding the Colorado membership.

There are 627 copies of the *Journal* of the A. M. A. coming to the state, of which but 396 are coming to members; 231 copies are subscribed for, possibly by members of the state society who are eligible to membership and should make application. Needless to say that a goodly percentage of 231 are coming to irregulars and men ineligible to membership.

Another phase of the subject is to be seen in our state journal, of which something over 800 copies are sent to members in the state or 404 in excess of the national publication, and contrary to the supposition that the latter reaches every member of the state association. There are about 1550 physicians in Colorado, and but 627 are receiving the national journal, or forty per cent. To those members of the state society who are subscribing to the *Journal* of the A. M. A. when they are eligible to membership, and the only energy required is the filling out of the application, we would say, "If not, why not?"

### *ANOTHER COMPANY RESTORES MEDICAL EXAMINER'S FEE.*

The Mutual Life Insurance Company of New York announces a restoration of the old fee (\$5.00) for medical examinations.

In a letter to the local medical referee, Dr. Cuthbert Powell, the medical director states that in his opinion the attitude of the company has been misunderstood, in that the economy was forced upon them by the New York laws limiting the expense.

It is further stated that the economies were greater than necessary, and the first thought was to restore the old fee.

Be that as it may, we are glad to learn of another company who recognize the worth of medical examinations.

### **IMPORTANT NOTICE.**

It is important that each member be reminded that it is his last opportunity to pay up his dues to his county society. If this is not done, the secretary of the constituent society cannot report the member to the state society and his membership will be suspended.

### *ADVERTISING IN STATE MEDICAL JOURNALS.*

There is so much written in reference to the inethical advertising in the journals of state medical societies that we have selected fifty of the inethical ads (some of these may not be considered strictly inethical, though they have not as yet been approved by the Council to our knowledge) with the endeavor to learn just which of the state journals were carrying them.

One fact to be noted in the table is that the journals owned and conducted by the state societies contain the least objectionable advertising, while those which are recognized "official organs" contain the greatest number. All journals are issued monthly except Virginia, District of Columbia and Minnesota, which are issued twice a month, and New Mexico, which is published quarterly.



1

[illegible]

\*Official organ but not owned by the State Society.

*Northwest Medicine*, "The Journal of the Washington State Medical Society," published by the Washington State Medical Library Association.

## LIST OF OBJECTIONABLE ADVERTISEMENTS.

(The numbers refer to the above table.)

- |                                |                                      |  |
|--------------------------------|--------------------------------------|--|
| (1) Gray's Glycerine Tonic Co. | (17) Mariani Wine.                   | (34) Liquid Peptonoids.                  |
| (2) California Fig Syrup.      | (18) Apioline-Cypridol, etc.         | (35) Colchi-Sal.                         |
| (3) Hemaboloids.               | (19) Pepto-Mangan.                   | (36) Panoepton.                          |
| (4) Cystogen.                  | (20) Sal-Hepatica.                   | (37) Protan (Mulford).                   |
| (5) Glycothymoline.            | (21) Cordial, Cod Liver Oil (Hagee). | (38) Cathartein.                         |
| (6) Kutnow's Powder.           | (22) Phillip's Emulsion.             | (39) Tyre's Antiseptic Powder.           |
| (7) Neurotone-Haas.            | (23) Carcholax.                      | (40) Campho-Phenique.                    |
| (8) Sal-Eliminant.             | (24) Sanmetto.                       | (41) Nephritin.                          |
| (9) Glyco-Heroin.              | (25) Tongaline.                      | (42) Iodalia.                            |
| (10) Dioxogen.                 | (26) Ozotone.                        | (43) Antikamnia.                         |
| (11) Listerine.                | (27) Ethcol-Bromidia, etc.           | (44) Peter's Peptic Essence.             |
| (12) Hydrozone-Glycozone, etc. | (28) Cealgic.                        | Syr. Roborans, etc.                      |
| (13) Lactopeptine.             | (29) Pelvita.                        | (45) Somatose.                           |
| (14) Pava-Pepsin Compound.     | (30) Hayden's Viburnum Co.           | (46) Ammonal.                            |
| (15) Antiphlogistine.          | (31) Rovinine.                       | (47) Henry's 3 Chlorides—3 Iodides, etc. |
| (16) Diouviburnia.             | (32) Wheeler's Tissue Phosphates.    | (48) Aletris Cordialrio.                 |
|                                | (33) Febri-Tone.                     | (49) Peacock's Bromides, etc.            |
|                                |                                      | (50) Seng. Cactina Pellets.              |

## Original Articles

### RECENT ADDITIONS TO OUR KNOWLEDGE OF THE PHYS- IOLOGICAL INFLUENCE OF LOWERED BARO- METRIC PRES- SURE.

By HENRY SEWALL, Ph. D., M. D.,  
Denver, Colo.

Although the great monograph of Paul Bert<sup>1</sup> upon the physiological effects of varied barometric pressures was published in 1878, it is only comparatively recently that systematic studies have been made on the life of man at higher altitudes. The time is fortunately past when one might venture to deduce from the principles of elementary physics and physiology the reactions of the infinitely complex human machine to changed environment. Those who, like ourselves, deal with vital phenomena at one to two miles above sea level must gratefully welcome the investigation by trained observers with the use of exact methods as to what, if any, modification of living processes results from lowering the barometric pressure. In 1894 a distinguished Italian physiologist, Professor Angelo Mosso, headed a party consisting of three scientific colleagues and a company of ten soldiers in a journey to the top of the Alpine Monte Rosa, elevation 14,960 feet.<sup>2</sup> During the ascent and for two weeks' sojourn at the height, elaborate observations with exact apparatus were made upon various physiological functions. A translation into English of Mosso's work was published in 1898. During the present year there has appeared a splendid contribution to the same subject, in a record of experiments and observations performed under essentially the same conditions as Mosso's, by four well-known German physiologists,

Professors Zuntz and Loewy and Drs. F. Muller and Caspari.<sup>3</sup> The results of these investigators so closely harmonize that the facts developed in their researches may be accepted, for the most part, as free from error; and it has seemed to me that a useful purpose might be subserved by a brief review of the Physiology of High Altitudes, especially as developed by Professor Zuntz and his colleagues.

The first query which must occur to the student in this field is: "What organs and what functions of the body are especially influenced by lowering of barometric pressure?"

Professor Zuntz and his colleagues close their remarkable memoir with the statement "that there is scarcely an organic system of our body (particularly when under the conditions of physical exertion) that is not affected in its function by high altitude."

#### *The Mechanical Effects of Lowered Barometric Pressure.*

Our conceptions of the influence upon the body of diminution of atmospheric pressure are inevitably founded upon our experiences with the cupping glass into whose air exhausted cavity the skin and subjacent tissues bulge in such an astonishing way. Elementary physics teaches that such a local tumor is only the result of the difference of atmospheric pressure within and without the rim of the glass. If the diminished air pressure were simultaneously applied to the whole surface of the skin and air passages, the gases in solution in the body would quickly find their way to the exterior and escape until their tension within the body just balances their pressure on its surface, and the intermolecular pressure throughout the body substance would come to an equilibrium with that outside. If a bottle of champagne is allowed to stand upright the liquor will sooner or later be-

come flat because the pent up gas in solution gradually diffuses through the cork; but if the cork is drawn under proper conditions the fluid froths up from the sudden liberation of gas which has been contained in the liquid under high pressure. It is evident, then, that given sufficient time, equilibrium of pressure between the gas dissolved and the air outside may be established without a single bubble of gas being thrown out of solution, whereas a sudden release of the pressure is attained with all the mechanical effects of an explosion. Essentially the same experiment has many times been unwittingly performed on human beings. Artisans who work in air chambers under water, sometimes at the enormous pressure of three or four atmospheres, are subject, often with fatal effects, to what has been called "caisson disease," the symptoms of which only manifest themselves during the period of decompression. The milder symptoms of the disorder include pains in the tendons and joints while the graver involve paraplegia and unconsciousness. There is no doubt whatever that the more serious phenomena, at all events, are due to the sudden liberation of the gases, especially nitrogen, from solution in the body fluids, resulting in actual injury of the tissue elements, particularly of the spinal cord. By prolonging the period of decompression the dangers are completely averted. In the classic experiments of Paul Bert it was uniformly found that the higher animals, when submitted to increased air pressure corresponding to about 15 atmospheres (or 3 atmospheres of oxygen), die in convulsions of asphyxia, because with such an increase of oxygen tension the tissues can no longer appropriate this element; it becomes then a distinct poison. It has been found by others that breathing condensed oxygen at somewhat lower pressure produces in-

flammation of the lungs and air passages.<sup>4</sup>

On the other hand, we know of no limit to the pressure to which protoplasm can adapt itself provided that pressure is gradually acquired and equally distributed within and without its substance. Various marine forms of life, even as high in the scale as the oyster, have been found living at an ocean depth of 2,000 m. or 200 atmospheres, and Roger found that bacteria were not killed at 2,903 atmospheres.<sup>5</sup> It has been found, however, as might have been expected, that when deep sea fish are suddenly hauled to the surface, the air inclosed in their swim-bladder may expand so inordinately as to force the vesicle out of the animal's mouth. In a lesser but still an important degree, the intestinal gases of a man may expand on ascending to a higher elevation. Both theory and experience, therefore, lead to the same conclusion, namely: That when barometric pressure upon the body is altered there at once proceeds the establishment of an equilibrium between the internal and external pressures. When decompression is too sudden to permit the escape of dissolved blood gasses by diffusion, they are suddenly thrown out of solution with destructive mechanical effects. On the contrary, when the change of superficial pressure is sufficiently gradual there is no marked disturbance of the equilibrium between the internal and external pressures. According to present accepted notions, therefore, the functions of the body may proceed without mechanical disturbance under a wide range of barometric pressure. This subject will be reverted to in a subsequent section.

#### *Relations of Oxygen Tensions in the Air and in the Blood.*

It is well known that oxygen of the blood exists, for the most part, in loose



chemical combination with the hæmoglobin of the red corpuscles. According to Foster's resume<sup>s</sup> of the literature, oxygen begins to escape from its combination with hæmoglobin when the partial pressure of oxygen in the air is reduced to something less than half the normal; i. e., when the total barometric pressure falls from 760 mm. Hg. (at sea level) to 300 mm., which about corresponds to the barometric pressure at an altitude of 17,000 feet. That is, under ordinary conditions of life at low and moderate altitudes, up to say 6,000 feet, the blood contains an excess of oxygen far above the working needs of the body. Nevertheless, physiological disturbances attributable to altitude are experienced long before there is a critical failure of oxygen determinable by physical methods. In other words, in our physiological economy we are dependent on a great excess of oxygen beyond what would seem to be the rigid physical requirements of metabolism, very much as in our social life we need a *luxus* of the coin of barter far in excess of the absolute necessities of living. The physiologic, like the social organism, is the creature of custom and needs time and training to adapt itself to a change of conditions. Herein lies a truth of the utmost practical importance for us who have so constantly to deal with living mechanisms suddenly transported from the barometric pressure of sea level (30 inches or 760 mm. Hg.) to that of our mountain slopes (about 24½ inches or 620 mm. at an elevation of one mile). Physiological study of every organic system of the body points to the same conclusion, namely; that vital adjustment to these changed barometric conditions need time and training. That, moreover, such adjustment is greatly impeded by every exercise of functional activity and is acquired most quickly and safely

under conditions of absolute physical and mental rest. When the organism attempts to perform some unaccustomed task there is a waste of force along channels unessential to useful work and an expenditure of nerve muscle energy far in excess of that needed to accomplish the purpose. As the task is repeatedly performed the nervous impulses become more perfectly co-ordinated so that gradually all the energy evolved tends to be confined to the effective mechanism. Such sensory-motor co-ordination is the most striking outcome of *training*. The momentous value of training for the activities of the voluntary nerve-muscle system is familiar to all. No less important, it may be assumed, is a similar course of habituation for the economical exercise of the vegetative functions as those of respiration, circulation and digestion. This appears to be an elemental truth in a profound subject. If these conclusions be true as to the healthy individuals investigated, how much more intensely must they apply to the crippled constitutions with which we, as medical practitioners, commonly have to deal.

*The Relation of Barometric Pressure to the Formation of Blood Corpuscles.*

Let us now see, in a general way, in what manner the tissues and functions of the body react to the conditions involved in a life at considerable elevations above the sea. During the past decade many observers have agreed that the number of red blood corpuscles per volume in the veins and superficial vessels increases markedly with elevation above sea level and, accordingly, it has been held that lowered barometric pressure acts as a stimulus to the activity of the blood forming organs. Ambard, studying the blood from the femoral artery of dogs exposed to diminished air pressure in a pneumatic chamber, found, on the contrary, a lessening in the number of ery-

throcytes.<sup>7</sup> There is reason to believe that no investigators have come nearer the truth on this subject than Dr. W. A. Campbell and Dr. H. W. Hoagland\* of Colorado Springs.

All observers agree that the increase in the blood count is practically immediate, being found even in balloon ascensions, and that there is as quickly a return to normal on descending from the higher level. There is no other certain evidence of such extraordinary formation and destruction of the blood disks as these facts would imply. When we realize that the slightest impediment to the circulation through the heart and lungs must normally, just as in cases of valvular heart disease, cause a heaping up of blood in the afferent vessels, it is evident that an estimation of corpuscles in a drop drawn from capillaries or veins must lead to an apparent though spurious increase in the erythrocytes.

It may be said in passing that the white blood corpuscles themselves are also subject to variations of distribution which give rise, in a given organ, to apparent leucocytosis or leucopenia without change in the total number in the body. Goldscheider and Jakob<sup>8</sup> found, for example, that where the number of leucocytes fell in a peripheral vessel from any cause, there was a corresponding increase in the leucocytes in the capillaries of the organs (e. g., lungs). But Zuntz and his colleagues have produced incontrovertible evidence that diminished barometric pressure does in fact stimulate to greater activity the blood forming organs. This they proved by microscopical demonstrations of blood formation in the bone marrow at high altitudes. The number of embryonic red cells found in the bone marrow on the mountains is greatly in excess of that

usual at sea level. The bone marrow at high elevations is a much more active tissue than on the plains. They also, as did others, showed that the total amount of hæmoglobin in the blood of animals sojourning or born at high altitudes is greater to the extent of 20 per cent to 30 per cent than in similar animals studied on the plains. These changes do not reach their maximum at once, after removal to a higher altitude, but proceed gradually (for several weeks). The younger the animal the greater is the proportionate increase of blood count. There are, however, unexplained differences in the individual reactions to altitude. The importance of these facts in relation to vital resistance in disease processes would seem to be of the first rank.

*The Influence of Lowered Barometric Pressure on Respiratory Mechanics and Gas Exchange.*

Of course the effects of lowered barometric pressure upon respiratory mechanics and the oxidations of the body were prominent subjects of investigation. The amount of air entering and given off from the lungs was measured by an appropriate gas meter, which could be strapped upon the back of the person observed while exercising, and which was put in communication with the air passages through a tube held in the mouth. It was found as a rule, that the oxidations of the body, measured by the amount of O absorbed and CO<sub>2</sub> produced, were increased with altitude, and that this oxygen consumption was proportionately much greater during muscular exercise at high altitudes. There developed, however, great individual differences as to the effect of altitude upon body oxidations. In some men the increase fails to appear even at an elevation of 14,000 feet, especially if reached through a number of stopping places; in others it appears at 1,600 m.,

\*The Blood Count at High Altitudes, Amer. Journ. Med. Sci., 1901.

about 5,250 feet altitude. It is especially worth noting that for like amounts of physical exertion, as involved in climbing similar ascents, the excess in oxygen consumption is extraordinarily less in trained than in untrained men. This is but one of many illustrations of the fact that training, or in other words, the acclimatization, results in an ability of the organism to adjust itself to the physical environment so that the efficiency of the body as a machine may be maintained at the highest level. Without going into technical details, it may suffice to say that Zuntz and his collaborators have pretty well demonstrated that even slight oxygen deficiency in the atmosphere may so pervert metabolism that there heap up in the circulation an excess of autogenic poisons, incompletely oxidized product of intermediary metabolism, which irritates the vital nerve centers, especially those concerned with respiration. For most normal people the grosser disturbances due to oxygen-hunger appear at an elevation of about 13,000 feet, while exceptionally more than 22,000 feet may be tolerated. In conditions of anæmia or diseases of the circulation dyspnoea may be experienced even in middle altitudes. As the individual becomes habituated to the lower air tension, the available oxygen of the body is more economically distributed to the living cells, probably through a better adjustment of the processes of osmosis and circulation. It is worth noting that when one descends to the plains after a sojourn at a higher level the demand of the body for oxygen for a considerable time decreases below the normal to an even greater degree than the oxygen consumption increased as a result of the ascent. It may be suspected that herein lies the physiologic foundation for the temporary extraordinary improvement we sometimes see in patients whom we

send to sea level because the higher altitude proves too great a strain upon their vitality. This subject will be reverted to in the section on the nervous system. And again it may be urged that the facts set forth demand that we, as clinicians, shall insist upon a carefully adjusted course of acclimatization for those invalids newly arrived from sea level.

The effect of lowered barometric pressure upon the rate and depth of respiratory movement also varies greatly with the individual's facility of physiologic adjustment. In the observations we are especially following there was usually a slight, more or less progressive, increase in the rate of breathing from sea level to the maximum height reached, 4,560 m. or 14,960 feet. The increase commonly amounted to from two to five respirations per minute, the rate later returning to normal. In a certain percentage of people there was a slowing of breathing on the mountain top to the extent of one to three respirations per minute. The observations were made upon subjects resting quietly in bed before arising in the morning. The depth of breathing, measured by the volume of air inhaled at an ordinary respiration, usually increased after ascent from sea level. Zuntz and others have found that with deep breathing the oxygen in the alveoli of the lungs is maintained at a higher tension than with shallow movements. Deep, slow breathing seems to be the concomitant of perfect training and adjustment to the conditions of high altitudes. Berson and Suring, who, with the aid of oxygen inhalation were able to survive the highest balloon ascent ever made, 10,800 m., about 35,435 feet, were carefully studied in Berlin as to their respiratory mechanics. While sitting quietly, the former breathed but six to nine times per minute and the latter only five to six times, but the volume of tidal



air reached the enormous values of some 800 cc. in one case and an average of 1,146 cc. in the other. It is evident that individuals differ in the perfection of blood supply to their vital nerve centers as they do in their respiratory mechanics. But even here idiosyncrasy obtrudes itself, for in some persons the respiration is more shallow on the heights than on the plains. In general, it has been shown that lowered barometric pressure stimulates the respiration so that a greater volume of air enters and leaves the lungs in a unit time than at sea level. In the majority of unacclimated people the increased lung ventilation is already obvious at an elevation of 1,500 m., 4,921 feet, and becomes considerable above 2,500 m., 8,202 feet. It should be noted, however, that when the air volume breathed at the higher altitudes is measured under the barometric pressure of sea level, it is found that the absolute mass of air ventilating the lungs decreases markedly at the higher altitudes. When the effect of muscular exercise upon respiratory activity is compared at different altitudes, it is found that with like outputs of exertion the whipping up of lung ventilation is relatively enormously increased at high elevations. Zuntz found that the air volume consumed in the performance of onemetre-kilogram of work was almost uniformly increased with altitude. At an elevation of 2,150 m., 7,054 feet, there was in one case about a threefold volume of lung ventilation necessary as at sea level in doing the same amount of work, and in another, at 4,560 m., 14,960 feet, the air volume breathed was five times as great. When we consider that increased lung ventilation implies a corresponding activity of all the mechanisms of respiration and circulation, not to mention the remoter influence upon secretion and metabolism, it is clear why our clinical observation has so often demon-

strated that, at the relatively high altitudes at which we live in Colorado, a given amount of physical work may in the unacclimated or invalid person produce disastrous consequences that would not have followed a similar feat performed at sea level.

Although an increased depth of ordinary respiration, leading to a greater girth of chest, is usual at high elevations, the so-called *vital capacity*, or maximum volume of air which can be expelled after deep inspiration, temporarily decreases to a marked extent, from ten per cent to twenty-five per cent, in mountain ascents. The explanation lies in the expansion of intestinal gases, combined with muscular and nervous fatigue. After a few days' rest the vital capacity returns to normal.

#### *Influence of Barometric Pressure on Proteid Metabolism.*

Perhaps the most important contribution of Zuntz and his colleagues to the physiology of low barometric pressure is the discovery of the peculiar modification of proteid metabolism at high elevations. The growing man or animal lays on proteid material as the most essential part of the body-machine. But, under ordinary conditions, it is seldom that the proteid moiety of adult tissues is increased.

It has been found, on the contrary, that a characteristic biologic influence of even moderately elevated regions is to stimulate the assimilation of nitrogenous material. Even at the height of 500 m., 1,640 feet, there is a perceptible laying on of proteid matter. At moderate altitudes healthy young and middle-aged persons may expect to increase their weight of albuminous (and presumably muscular) tissue. This effect is greatly enhanced by judicious physical exercise. At extreme elevations, as 4,560 m., 14,960 feet, the nutritive process varies in

the other direction and there is an increased destruction instead of assimilation of proteid material. The critical elevation at which this occurs varies according to the individual constitution; in one person observed the critical height was below and in another above 2,900 m., 9,514 feet. In untrained or unacclimated people the increase of proteid disintegration occurs at much lower levels, as 1,600 m., 5,249 feet, to 2,200 m., 7,217 feet. In some cases it has been shown that after descent from a sojourn at 2,200 m., 7,218 feet, there is a further tendency to laying on of proteid. As pointed out by Prof. Zuntz, the association of these facts with the evidence already at hand as to the stimulation of blood regeneration even at altitudes of 400 m., 1,313 feet, to 500 m., 1,640 feet, we have a physical explanation of the peculiar mental and physical invigoration that commonly attends a sojourn in the mountains.

*Influence of Low Barometric Pressure Upon the Heart and Circulation.*

There is no physiological function which in popular estimation, and deservedly so, is more vitally affected by lowered barometric pressure than the circulation of the blood. Studies of blood pressures under such conditions are astonishingly lacking both in number and completeness. Gardiner and Hoagland<sup>9</sup> studied twenty-two young men at Colorado Springs, elevation 6,000 feet, and again after being transported by a cog-railway to the top of the neighboring Pike's Peak, elevation 14,130 feet. They found that, immediately after arrival at the mountain top, the average maximal arterial pressure had fallen from 126 mm. Hg. in Colorado Springs, to 121 mm. After a sojourn of three and one-half hours on the Peak, some slight exercise having been taken in the meanwhile, there was a further fall of blood pres-

sure to 118 mm. The corresponding pulse rates averaged 86 and 99. The present writer has made a series of observations on the barometric relations of venous blood pressure by the use of Gaertner's method of noting the height, as regards the heart, at which a vein of the hand or arm collapses when the member is elevated. The results indicate that there is a positive increase of venous blood pressure in man at Denver, elevation 5,280 feet, as compared with sea level. Researches on this subject must take into account the velocity of blood movements as affected by barometric pressure. While in acclimated, healthy persons the pulse rate at considerable elevations is practically identical with the rate at sea level, its acceleration with physical exercise is proportionately much greater at high elevations. Unless the output of blood with each ventricular systole decreases in proportion to the acceleration of the heart beat, it must follow that high altitudes, at least under conditions of physical exertion, greatly increase the velocity of blood current and, presumably, the flushing of the tissues with nutritive material. Erlanger and Hooker<sup>10</sup> argue that the pulse pressure, or difference between the maximal and minimum arterial pressures, can be used as a basis for calculating the velocity of the blood current, and it is to be hoped that studies of this factor as influenced by altitude will not long be wanting. It is not yet clear what relation to the circulation is borne by physiologic variations in the viscosity of the blood. The increase in number of blood corpuscles in high altitudes would seem, theoretically, to entail a proportionate addition to the internal resistance to blood movement; but this interesting subject does not appear to have attracted investigation.

Zuntz and his colleagues found that while, with a given muscular exertion,

the pulse rate increased more at even moderate elevations than at sea level, the effect of training was to compensate for this excessive acceleration and do away with it. They sound a warning which must have for us a peculiar force, that at high altitudes, especially under conditions of physical exertion, the boundary which separates the normal from the pathologic heart action is exceedingly narrow and may easily be overstepped.

Disturbances of nutrition and heart overstrain may gradually develop to a fatal degree without exciting any subjective sensation of illness or suspicion of danger. How full are the memories of each of us of needless fatalities from cardiac overstrain, lung œdema and physiologic breakdown in invalids who, newly arrived in our midst, buoyed up by the stimulation of the climate, indulge in exercise when they should be at rest in bed. Physiologists have shown that fatiguing exercise leads to accumulation of blood within and dilatation of the heart. Professor Zuntz compared the shadows of the heart in two X-ray pictures of the same person taken, one after a strong inspiratory effort with mouth and nose closed, and the other during a strong expiratory effort. The skiagraphs showed clearly that the thoracic organs contained much more blood in the first than in the second case. From the difference in the areas of the heart shadows it was calculated that the heart volume at the end of the modified inspiration was 400 cc. greater than after expiration.

Professor Mosso was able to have demonstrated by means of the phonendoscope that the volume of the heart increased perceptibly as result of the exertion of mountain climbing and that the dilatation involved the right side of the organ to a much greater degree than the left.

It is hardly necessary to state the conclusion that, even in moderately high altitudes, we have a most potent means of either helping or harming a feeble heart. Much thought and labor have been bestowed upon the mechanical influence of lowered barometric pressure upon the circulation. The great physiologist, Haller, a hundred and twenty years ago, taught that in an atmosphere of lowered tension blood was drawn to the surface and produced a turgor of lungs and skin. Other investigators have claimed, now that blood tends to stagnate in the lungs, now that those organs become more anæmic with lowered barometric pressure. But the more trustworthy observations seem to show that the mere lowering of barometric pressure has no direct mechanical effect on the circulation. According to Zuntz the cyanosis and local bleeding from mucous surfaces which often occur at high elevations, are simply due to dilatation of the peripheral vessels brought on by lack of oxygen which is in turn more or less dependent on cardiac fatigues.

#### *Modification of Sweat Secretion in High Altitudes.*

The technical difficulties in the way of determining the relation of altitude to sweat secretion are very great. It is commonly stated by those who guess at facts that the circulation in the skin and activity of the sweat glands increase with elevation above sea level. Mosso found, on the contrary, that a resting man lost weight more slowly from the skin on the mountains than at sea level. Zuntz and his party, however, found that exercise at a moderately high elevation, 1,740 feet, produced much more abundant sweating than in Berlin. Training, however, greatly reduced this exercise-secretion and at the same time made it more effective in cooling the body.



*Relation of Barometric Pressure to Body Temperature.*

The constancy of the body temperature is dependent upon the co-ordination of the mechanisms for heat production and heat dissipation. The effect of great altitudes, as 14,960 feet, is to raise the body temperature, in some persons to over 100 F. This abnormal body heat gradually passes off with acclimatization. This effect is very much exaggerated as the result of muscular exertion. The clinical experience which makes us reluctant to permit fever patients to seek the higher altitudes finds herein an experimental basis.

*Effect of High Altitudes on the Functions of the Nervous System.*

Even in popular estimation, no organic mechanism of the body is more prone to react to the conditions of high altitudes than the nervous system. The chapter of Professor Zuntz and his associates on this subject will be endorsed by every clinical observer of experience. Varying with individual resistance and elevation above the sea, the tendency of low barometric pressure, manifested sometimes even at moderate altitudes, is to over stimulation and early exhaustion of physiologic functions in certain unacclimated persons. The climatic irritation tends to beget, especially in nervous temperaments, a peculiar restlessness which impels to continuous bodily exertion, the fatigue of which stimulates to further efforts rather than soothes to rest. There is no doubt whatever that even at the moderate elevation of Denver, one mile above sea level, many invalids, especially such as suffer from pulmonary tuberculosis, needlessly go to ground within a few days of their arrival on account of overstrain of the right heart followed by pulmonary œdema brought on by thoughtless exertion. The mental anomalies may cover a wide range from

sudden outbreaks of exaltation or depression to actual delirium. Our former colleague, Dr. J. T. Eskridge, came to practically the same conclusions from his own rich experience." There is no prescription we are prone to make for "overwrought nerves" than a change to a lower altitude, nor is there any which is likely to prove more successful. But it must not be overlooked that such patients would, for the most part, fall within the class of invalids in any climate and often all that is needed is a change of scene and mode of life *per se*. It is especially intended here to dwell upon the pathologic rather than the physiologic attributes of high climates. It is the unstable, the neurasthenic temperament which, when unguarded is likely to suffer at high elevations. Persons of less irritable disposition, when overworked at sea level, probably can find no such refreshment as comes from a sojourn in the mountains. According to Zuntz, the abnormally stimulating effects of high altitudes is due largely to the intense illumination of the skin, especially on account of the large proportion of chemical rays in the solar light. Insomnia is apt to be provoked by this irritation, but after a sleepless night under these conditions one arises in the morning much more refreshed than after a similar experience at sea level.

There is a strong popular impression that the effects of alcoholic potations are in all respects more pronounced in high than in low altitudes. The exact observations of Mosso and other competent observers are, however, directly to the contrary. Mosso found, for example, that 40 cc. of absolute alcohol, in a concentration similar to sherry, given on a nearly empty stomach at an altitude of about 13,300 feet, in contrast to its effect at sea level, produced no stimulating effect, neither did it influence especially the action of the heart or respiration.

Of especial psychological interest are the experimental findings of Galeotti that the deglutition center is more easily fatigued at high than at low elevations.

Frequent mention has been made in preceding paragraphs of the persistence of favorable metabolic processes, which have been initiated under the stimulus of moderately high altitudes, after return to the original environment. It is a curious fact of climatic therapy that persons, manifestly going to ground with a more or less generalized tuberculosis, frequently come to Colorado in the hope of cure; but, after a sojourn of some weeks or months it is clear that the disease is progressing to fatal termination. The patient is sent home and, not infrequently, there is an immediate improvement in every symptom and the patient takes, at least temporarily, a new grasp on life.

#### *Autointoxication in High Altitudes.*

Recent pathologic chemistry has taught us that the critical symptoms of many of the diseases with which we have to deal are due to intoxication with an excess in the body of waste products which the organism is powerless to oxidize to their normal condition as excreta. Zuntz and others have developed the extraordinary paradox that though, at very high altitudes, the actual consumption of oxygen is greater than on the plains, there is a more or less marked accumulation of suboxidized "fatigue products" in the circulation which irritate the nerve centers and in turn affect metabolism. The production of these substances is greatly augmented by physical exercise, is subject to great individual differences and is done away with after through acclimatization. In the work so frequently quoted in these pages there is reviewed the important researches of Werchardt<sup>11</sup> on fatigue toxins. When an extract from the muscles of an exhausted animal is injected into a fresh subject, the symptoms of extreme fatigue

or even death of the latter may be produced. When, however, the toxic extract is inoculated in very small but gradually increasing doses, the animal thus treated becomes finally immunized to the fatigue toxin. Wolf-Eisner<sup>12</sup> later, in discussing this work, suggests "that athletic training may produce an immunity to this toxin, and thus allow the trained athlete to perform much more work than the untrained." The immense importance of these conceptions in our clinical physiology, particularly as modified by life in high altitudes, can here receive but a passing mention.

#### *Summary and Conclusions.*

Professor Zuntz and his collaborators summarize their great work on the physiological relations of barometric pressure by saying that in high altitudes "Metabolism, especially during physical exercise, is exaggerated; the laying of proteid material is favored. The activity of the heart is stimulated, the breathing is strengthened, both of them through the medium of the nervous system operating upon the heart and respiratory mechanism. Blood formation is increased and the skin trained to more energetic activity."

Their advice as to the classification of cases suitable or unsuitable for treatment at high altitudes is based partly upon theory, partly upon medical experience of the ages. Residence at moderately high altitudes is advocated for persons with pulmonary consumption, scrofula, anæmia, general body weakness, chronic gastrointestinal catarrh, stagnation of blood in the abdominal organs and its effects, and intermittent fever. Statistical evidence is against the suitability of high altitudes for those suffering from acute catarrh of the respiratory organs, inflammatory affections of the lungs and pleurae and their sequels, articular rheumatism and affections of the heart.

The nervous and neurasthenic are apt to do ill. In arterial disease the circulatory excitement so common at high elevations begets danger, and cases of pulmonary emphysema are unfavorably affected. We will, however, subscribe to the admission of the authors that the clinical problem is so enormously complex that we must still depend upon empiricism for much of our application of climatic therapeutics.

This article was begun with the expectation of applying the physiologic deductions from the great series of observations and experiments which have been reviewed to elucidation of the effect of altitude upon certain pathologic conditions, especially those of nephritis; but the subject matter is already too voluminous for this occasion. In conclusion, I think that we whose life work is carried on at the moderately high altitudes ranging from 5,000 to 10,000 feet above sea level, must unite in a feeling of gratitude to those who, possessing the ability and the scientific training, have devoted themselves to the arduous labors which I have but superficially reviewed. Their results give a firm foundation in exact experiment to many of the clinical impressions which we have laboriously accumulated through years of toil. It is evident from their work, as from our own experience, that for every individual there is an optimum altitude up to which his efficiency as a machine improves and beyond which it is physically and vitally disastrous for him to go. It has been demonstrated with mathematical precision that in removing from a lower to a higher elevation the physiologic coordinations of the body tend to become disturbed and that their readjustment occurs most readily during a period of physical and mental repose. How vital is the significance of such a theorem to us who deal so often with the unacclimated invalid!

Finally, if deductive logic has any place in biologic problems, there is once for all demonstrated the error in the point of view of that increasing number of our colleagues who deny the specific virtues of resorts in high altitudes in the treatment of cases of certain diseases including, especially, the majority of those who suffer from pulmonary tuberculosis.

<sup>1</sup>Paul Bert, *La Pression Barométrique*, Paris, 1878.

<sup>2</sup>A. Mosso, *Life of Man on the High Alps*, Trans. by E. L. Kiesow, 1898.

<sup>3</sup>N. Zuntz, et. al., *Hohenklina and Bergwandern*, 1906.

<sup>4</sup>Leonard Hill, et al, *Recent Advances in Physiology and Bio-Chemistry*, 1906, p. 239.

<sup>5</sup>Leonard Hill, *Op. Cit.*, p. 252.

<sup>6</sup>Text-Book of Physiology, 1889, Pt. 2, p. 575.

<sup>7</sup>Tissier in Cohen's *Syst. of Physiologic Therapeutics*, Vol. X. p. 145.

<sup>8</sup>Hill, *Op. Cit.*, p. 429.

<sup>9</sup>Trans. Amer. Climatolog. Assn., 1905, Vol. XXI, p. 80.

<sup>10</sup>An Experimental Study of Blood Pressure and of Pulse Pressure in Man. Johns Hopkins Hospital Reports, Vol. XII, 1904.

<sup>11</sup>Trans. Am. Clim. Ass.

<sup>12</sup>Weber, *Ermüdungstoxin and Antitoxin*, *Munchener Med. Wochenschr.*, 1904-1905.

<sup>13</sup>Centralbl. f. Bakt. 1906, Bd. XL, p. 634. (Abst. in Amer. fl. Med. Sci., Sept, 1906, p. 496.

## OBSERVATIONS ON EXPERIMENTAL STOMACH SURGERY, WITH SPECIMENS.

By ARTHUR R. POLLOCK, M. D., Antonio, Colo.

These observations are based on thirty-six operations on dogs.

*Gastroenterostomy by Murphy Button.*

Specimen No. 1 is one of gastroenterostomy (anterior) by the Murphy Button. Specimen obtained at end of fifteen days. You will observe that the stoma is small, being limited to the size of the button used. There were seven



gastroenterostomies made by use of the Murphy Button. The following observations were noted as to behavior of the button:

1. Gastroenterostomy by Murphy Button; at end of three days abdomen opened and button found in situ.

2. Gastroenterostomy by Murphy Button; at the end of five days button found in situ.

3. Gastroenterostomy by Murphy Button; at end of six days button found free for four-fifths, but still holding by one-fifth of circumference.

4. Gastroenterostomy by Murphy Button; at end of eight days button found in ileum a few inches below site of anastomosis.

5. Gastroenterostomy by Murphy Button; button passed by animal on tenth day.

6. Gastroenterostomy by Murphy Button; on fourteenth day button found low in ileum.

7. Gastroenterostomy by Murphy Button; on fifteenth day button found in situ although the tissue in the bite of button was sloughed away.

Therefore as to the time required for the button to free itself and pass from the site of anastomosis, the following conclusion is reached:

*That the time varies greatly, but at least seven days is required.*

Gould<sup>1</sup> in his recent work says: "After a period of from one to three weeks, possibly longer, the pressure of the button causes death and sloughing of the bowel edges within its clasp; thus the button is liberated and is allowed to pass on."

*Gastroenterostomy by the McGraw<sup>2</sup> Elastic Ligature.*

Specimen No. 2 is one of gastroenterostomy with entero-enterostomy both by the above ligature. There were seven anastomoses by this method,

and the following data noted as to time required for the ligature to cut through:

1. Gastroenterostomy by the McGraw ligature; at the end of thirty-hours abdomen and stomach opened, finger inserted and ligature found in situ—no stoma.

2. Gastroenterostomy by above ligature; at end of sixty-nine hours ligature found partially cut through, i. e., some folds of tissue cut through but no distinct stoma established.

3. Gastroenterostomy by above ligature; at end of seventy-two hours ligature found for the greater part cut through.

4. Gastroenterostomy by above ligature; at end of seventy-six hours ligature found free in intestine two inches below site of anastomosis—good stoma.

5. Entero-enterostomy by the above ligature; at end of ninety hours stoma found well established, ligature found hanging from site of anastomosis.

6. Gastroenterostomy by the above ligature; on the seventh day stoma found well established and ligature found hanging from site of anastomosis.

7. Entero-anastomosis by above ligature; on seventh day stoma found well established, no ligature found.

The medium sized ligature which is here presented was used in these experiments.

Therefore the following conclusion may be made:

*That in gastroenterostomy done upon the healthy dog by the use of the medium sized McGraw ligature a period of time approximately seventy-four hours is required for the stoma to be established.*

Dr. A. J. Ochsner<sup>3</sup> says: "I am not able to tell how much time it takes for the ligature to cut through in the human, but know that it cuts through much faster in those that are vigorous than in those that are cachectic, consequently I

would think that the time would be about even in dogs and fairly vigorous human beings, but I cannot demonstrate this because in the human being the ligature lies in some portion of the intestinal canal before it is expelled."

*Gastroenterostomy by the Maury Twine Method.*

Specimen No. 3 is an anterior gastroenterostomy by the method of Dr. J. W. Draper Maury<sup>4</sup> of New York. A piece of twine—fish line—is used, and inserted in such a manner as to produce a triangular opening. Dr. Maury<sup>5</sup> gives seventy-two hours as the time required for this ligature to cut through. This specimen was removed at end of seventy-two hours. Observe that the stoma is only partially established and the fish-line can be seen and felt in place. There were seven gastroenterostomies done by this method but not more than two or three specimens obtained with good stomata. This was due, no doubt, to faulty technic, as the technic of placing the twine is by no means easy to acquire. Dr. Maury gives among the advantages of this method over that of the McGraw elastic ligature, that the stoma being triangular is more likely to maintain its patency, also that the material is always to hand. From my experience with the method I am of the opinion that its advantages are outweighed by its disadvantages.

*Gastroenterostomy by the Moynihan Method.*

Specimen No. 4, is one of posterior, "no-loop," gastrojejunostomy by the method of and as introduced into this country by Mr. B. G. A. Moynihan<sup>6</sup> of Leeds, England. This is in the main the method originated by Von Hacker<sup>7</sup>. This operation is performed by the use of clamps, an immediate stoma is made, anastomosis done by two rows of sutures, an inner through and through continuous

and an outer sero-muscular continuous suture. In this specimen you will observe that the anastomosis is made with the jejunum in the position from *left to right*. For about a year past Drs. Mayo<sup>8</sup> have modified this method by anastomosing the jejunum with the stomach leaving it in its natural position from *right to left*. This is the method of choice in all gastroenterostomies, but when, owing to posterior adhesions or other complicating conditions, a posterior anastomosis cannot be made, then an anterior anastomosis by the button or elastic ligature is given second choice. There is however one condition in this connection which should be borne in mind; that in complete closure of the pylorus the ligature method is contra-indicated, as Dr. Maury<sup>9</sup> has shown experimentally that where the stomach is completely shut off death takes place in from twenty-four to forty-eight hours preceded by tetanoid symptoms.

*Partial Gastrectomy or Pylorectomy.*

Specimen No. 5 is one of exsection of the pylorus. There are three methods of re-establishing the continuity of the gastro-intestinal tract after pylorectomy.

1. By joining the distal open end of the duodenum to the open end of the stomach—first method of Billroth.<sup>10</sup>

2. By anastomosing the cut duodenal end to the posterior wall of the stomach—method of Kocher.<sup>11</sup>

3. Posterior gastrojejunostomy after closing open ends of duodenum and stomach—second method of Billroth.<sup>12</sup>

The last named method is that most often used, though the Kocher method is adaptable to some cases. This specimen demonstrates the second method of Billroth and is done after the technic of Dr. W. J. Mayo.<sup>13</sup>

Specimen No. 6 shows the outer Lembert continuous suture partly intruded into the lumen.<sup>14</sup> This specimen had a

post-operative life of three months. Most of the other specimens were from animals with a short post-operative life and the sutures were found in situ or buried in the serosa.

<sup>1</sup>Gould's Operations Upon the Intestines and the Stomach, p. 48.

<sup>2</sup>McGraw: Jour. A. M. A., May 16, 1891; New York Med. Jour., Jan. 26, 1901.

<sup>3</sup>A. J. Ochsner: Personal Letter.

<sup>4</sup>Maury: Jour. A. M. A., Sept. 17, 1904.

<sup>5</sup>Maury: Surg. Gyn. and Obst., May, 1906.

<sup>6</sup>Moynihan: Jour. A. M. A., Dec. 24, 1904.

<sup>7</sup>Von Hacker: Wien. Klin. Wochenschr., 1890. 111. 348. Verhandl. d. Deutsch. Gessellsch. furerhir., 1885.

<sup>8</sup>Mayo, W. J.: Jour. A. M. A., Sept. 22, 1906.

<sup>9</sup>Maury: Surg. Gyn. and Obst., May, 1906.

<sup>10</sup>Billroth: 1. Wien. Med. Wochenschr., 1881. No. 6, s. 162.

<sup>11</sup>Archiv. fur klin. Chir., 1891. Bd. 42. S. 162.

<sup>12</sup>Billroth II, Reported by Von Hacker, Die Verhandl der Deutsch Gessellsch. fur chir., 1885, Part II, Vol. XIV, Page 62.

<sup>13</sup>Mayo, W. J.: Annals of Surgery, March, 1904; Jour. A. M. A., Apr. 7, 1906.

<sup>14</sup>Maury: Surg. Gyn. and Obst., May, 1906.

### ECTOPIC GESTATION.

By T. A. STODDARD, M. D., Pueblo, Colo.

At a meeting of the London Obstetrical Society, May 7, 1873, Lawson Tait said: "I venture to bring this subject before this society, because I have been fortunate enough to have seen three cases of extra uterine gestation and to have operated on two, once successfully," and since that time the profession has considered this pathological condition to be of the utmost importance. Were I to read you a paper consisting of the reports of the experiments of others, I would only be doing for you what you might all do for yourselves, at the cost of a little reading on the subject, which I apprehend would do no one any particular harm.

The history of ectopic gestation is full of interest and must make us realize that our paths are laid in pleasant places, hav-

ing been blazed out by the pioneers in medicine of the centuries that have passed. Smellie of London was probably the first to give a detailed history of a number of these cases, and some of his observations show him to have been a man beyond his time. He wrote in the year 1779, nearly a century before Tait wrote his first article on the subject. In 1842 Campbell of Edinburgh wrote quite extensively on the subject, but those who knew him best did not seem to place much reliance on his reports. The next to write extensively was Parry of Philadelphia, whose work was published first in 1876, and this is the most classic on the subject up to the present time. Tait wrote at length on the subject in 1878, and today very little more is known of the pathology and prognosis than we learn from his writings.

The relative frequency of ectopic pregnancy to normal pregnancy is extremely difficult to determine. Some place it at 1 to 500, while others give it as only 1 in 20,000. My own experience leads me to believe that the number is relatively much larger than is generally supposed, many cases going unrecognized to death or recovery.

The etiological factors of ectopic pregnancy as given by writers on the subject are many and varied. The weight of written opinion seems to lie in the direction of previous diseased condition of the pelvic viscera. My experience leads me to the belief that diseased condition of tubes or ovaries has little or nothing to do as causative factors in ectopic pregnancy. Malformations play as small a role as diseased conditions, and that women who have shown an inaptitude for conception are more subject to this serious accident, I believe is as fallacious as most of the other reasons advanced. There is no doubt that the normal position of the ovum when impregnation occurs is in



the uterine cavity, and if by any accident, or for any reason, impregnation should take place in the tube, then a tubal or ectopic pregnancy is the result. Why such an accident should happen must be, for the present at least, a matter of conjecture, at the same time I believe that the habit of sexual intercourse during the intermenstrual period, or so long after the cessation of the menstrual flow, as to preclude the possibility of an ovum being in the uterine cavity, or on its way thereto, has much to do in an etiological way with the prevalence of ectopic gestation.

Nulipara are as liable to this condition as multipara, but not more so in my judgment, and the woman who has borne children recently is just as liable as her sister, who has had a long period of sterility.

The pathology of ectopic pregnancy is interesting in itself, and is made more so by the fact that many writers have a classification for the condition of from three to eleven forms. I believe that there is only one primary form, and that is tubal, all other so-called forms are different stages of the gestation, and the pathology is produced by the growth of the foetus in the abnormal position. The product of conception is usually found in the outer half of the tube, and the point in the gestation sack where the corionic villi are the closest together, will be the point in the tube where bulging will be greatest. If this happens to be in the upper or free edge of the tube, then the growth will be in that direction and when rupture occurs the foetus is likely to be expelled into the abdominal cavity, and if the patient does not succumb to the hemorrhage which must occur, then we may have an abdominal pregnancy. On the other hand, if the growth is greatest on the lower part of the tube, that is the part which is not covered by the peri-

toneum, we are likely to have the rupture between the folds of the broad ligament, and thus an extraperitoneal pregnancy. Again a tubal abortion may occur, and the contents of the tube be expelled into the abdominal cavity, and then if by any chance the chorionic villi should find lodgment in the peritoneal cavity, we would have an intra-abdominal pregnancy, and this might go on to full term. If the impregnated ovum starts growth in the proximal half of the tube, rupture is likely to occur early, and the hemorrhage seems to be more profuse than if the rupture is in the outer half. The nearer the uterus the lodgement of the ovum, the earlier will be the rupture, in one case I knew it to happen on the thirty-fifth day of the pregnancy, the patient dying without operation. I believe that recovery from tubal abortion occurs occasionally, the foetus dying, and then becoming absorbed with the membranes. As soon as any considerable amount of blood finds its way free into the abdominal cavity, a certain amount of adhesive inflammation arises and this I believe is the reason why so many writers claim that there exists a previous pelvic disease. Ectopic pregnancies may be multiple, that is twin or triplet, they may be double, that is a pregnancy in both tubes at the same time. Four years ago I had the fortune to have a case of this character, where there was a three months' foetus in the right tube unruptured, and in the left tube a six weeks foetus also unruptured, and this in a woman with an otherwise normal pelvis, and the mother of three children, the oldest seven and the youngest one year old. Again there may be a tubal pregnancy existing at the same time that a normal pregnancy exists, and if a diagnosis is made, there will be no doubt as to the proper method of procedure.

The symptoms of ectopic pregnancy previous to the fifth week are exceedingly obscure, but after that time there are usually sufficient symptoms to call the attention of the woman to the fact, that all is not well, particularly if she happens to be a multipara. She is conscious of occasional sharp cutting pains in one side or the other, determined by the tube in which the pregnancy happens to be located. She has missed one period, or as she will say she has gone over her usual time a few days, or a week or two. Very frequently at about six weeks there is a bloody discharge from the uterus, which the patient thinks is her delayed menstrual period, but if she has previously had pain during her menstrual menses, she is surprised to have the flow come on without any pain. On this point alone I would be almost willing to make a diagnosis of tubal pregnancy. If this discharge is carefully examined the false decidual shreds will be observed. The patient frequently complains of a feeling of distress in the rectum, and of an unpleasant desire to defecate, when she knows her bowels are already emptied. The uterus enlarges almost as rapidly as if the pregnancy were normal, until the false decidua has been expelled, and then it seems to become somewhat reduced in size, but not to its normal unimpregnated state. Occasionally the first pain that the patient seems to notice is sudden and violent, and is most likely to occur when the patient is at stool. She will suddenly scream with pain, and then become quickly prostrated, or go into a state of collapse, from which she may never rally, but die in a few hours. Again she may quickly rally from the state of syncope, and be comparatively well for a day, or even a few days and if the hemorrhage was severe she will complain of pain under the point of the scapula. This I have noticed so frequently that I cannot help placing some diagnostic value

on it. The pulse, after an attack of this kind, will be rapid, small and thready, but it may soon recover itself. If the hemorrhage is profuse she will have a cold sweat, and will frequently vomit, and if a meal has recently been ingested, she will completely empty her stomach, and then call for water. There is not as much dullness as might be expected, from the large quantity of blood frequently found in the abdomen. If the tendency is toward tubal abortion the pain is not so sharp, but continuous, accompanied by a feeling of bearing down and frequently with a feeling of faintness. These pains seem to come with a certain degree of regularity, much the same as the pains of true labor or of an uterine abortion. In these cases of tubal abortion there is more likely to be a free discharge of blood from the uterus than if the tube has ruptured, or if the ovum is located near the uterine end.

On making a physical examination of the abdomen we will find nothing to indicate what is going on inside, if the tube has not already ruptured; but if that has taken place the abdominal muscles are found to be rigid, and the lower segment more rounded, than at a corresponding period of a normal gestation. A vaginal examination will reveal a small tender mass behind and to the left or right of the uterus, according as to whether it is the right or left tube which is involved. The uterus will be found enlarged, the servix not so soft as we would expect if the pregnancy were uterine, and the whole uterine body is lifted up under the pubic arch. I know it is possible for the pregnant tube to be placed anterior to the broad ligament, as I have seen one such case, which had been diagnosed as a fibroid growth, but the sudden onset and rapid growth, together with the character of the pain, led to a correct diagnosis before rupture took place. After rupture has

taken place and a considerable amount of blood has gained access to the abdominal cavity, we will find a peculiar condition of the vault of the vagina, it being stretched squarely across like a level floor and the cervix projecting through as though it were an after-thought to have it there at all. I consider this sign as of great importance from a diagnostic standpoint. There is seldom any rise of temperature, until at least twenty-four hours after hemorrhage, and even then the rise is very slight. The percentage of cases where ballotment can be practiced to advantage, is very small, in fact, I have never seen a case where this was possible, and gain any information.

In making a diagnosis of ectopic gestation, we must keep well in mind the fact that the corpus luteum of pregnancy, frequently becomes pathological, or so much enlarged as to resemble a pathological condition of the ovary. This mistake has been made with disastrous results. A large pus tube may easily be mistaken for a tubal pregnancy, if we do not remember that where there is such a condition existing the pelvic viscera is bound down by extensive adhesions to such a degree as to preclude the probability of any kind of a pregnancy being possible. Tubal pregnancy may be mistaken for a complete abortion and then if a curettment is done the patient's life may be sacrificed. A normal pregnancy with a rapid growing tumor in the posterior cul-de-sac, may be mistaken for a tubal pregnancy, but in the absence of alarming symptoms it is well to wait for further developments, and keep the patient under careful observation.

Taking into consideration the chances for errors in diagnosis, it is quite impossible to be able to state with any degree of certainty what percentage of cases of ectopic pregnancy recover without op-

erative intervention, but it is doubtless small. In view of this any one who, after having made a diagnosis of ectopic pregnancy, still continues to treat on the "expectant plan" is placing his patient in a position of danger, that is not justified by the importunities of friends, or the incapacity of the practitioner.

Ectopic pregnancy can safely be classed among the most fatal of all the diseases to which women are subject, from the time of puberty, to the menopause. I have already said that few cases recover by nature's efforts alone, it is therefore important that whatever is done should be the best according to our knowledge, and this I believe is abdominal section. The removal of a ruptured tubal pregnancy or rather of an ectopic pregnancy, through an abdominal incision is a serious and difficult operation for the most skillful, and I believe should not be attempted by every one who has a license to practice the healing art. The attempt on the part of some surgeons to remove the ruptured tube through the vagina, is certainly carrying the "vaginal route fad" to the place where we must all admit that they are using this secret and narrow path as a highway to enable them to reach notoriety. The operation through the vagina is not surgical, is not safe, is not simple, it is an evidence of uncertainty of diagnosis, and must result in bungling surgery, and end in the large majority of cases in bad results.

The attempt to destroy the fœtus in the ectopic gestation sac, by the use of electricity, or the hypodermic injection of drugs, is a relic of a past age and cannot be too strongly condemned.

The only surgical procedure in ectopic pregnancy is coeliotomy. An incision is made in the median line, the index finger passed down to the fundus uteri, and thence out to the tube containing the pregnancy for doubtless this has been de-



terminated by the diagnostician. The tube is carefully brought up to the abdominal opening and removed up to the uterine cornu. If the tube has already ruptured or if a tubal abortion has taken place the belly will be found full of blood. The omentum will be rolled up usually above the umbilicus, and the intestines will be surrounded by blood clots. In this case the tube must be reached at once, for bleeding may still be going on, and as the patient is already exsanguine, the further loss of blood must be stopped at all hazards. A clamp should be placed on the broad ligament below the tube, thus stopping all hemorrhage. Normal salt solution should now be turned into the belly, and allowed to flow continuously during the remainder of the operation, for a double purpose, to overcome shock and to wash out the effused blood. I believe it is a bad practice to spend time in trying to get away, with the finger, the blood clots, which are found clinging to the viscera, and parietal wall.

In our day it is exceedingly rare to find ectopic gestation, which has gone beyond four months, and in those cases where they have, the foetus will be found free in the abdominal cavity, and the placenta attached low down in the pelvis. If the foetus is alive, great care must be used in its removal, for if the placenta is disturbed, there is liable to be the most violent hemorrhage, therefore after the removal of the foetus, a careful packing over the placenta should be made, leaving the free end of the gauze through the lower angle of the wound. If the foetus is dead there is no reason why the placenta should not be removed entire, and then if much oozing takes place from the placental site which will not cease with heat and pressure, packing may be resorted to. In one such case, which came under my care, I was able

to empty the belly of the product of conception, and with heat and pressure for ten minutes, all oozing stopped and the patient made a rapid recovery. Where rupture has taken place between the folds of the broad ligament, and a correct diagnosis is made, the logical as well as the surgical procedure, would be to open up and drain through the vagina, but I consider it quite impossible to be certain in these cases, as to the exact condition, and therefore the abdominal route is even here the safest. I have seen but one of these cases, and here I opened the belly, made an incision through the peritoneal investment of the gestation sac, delivered the foetus, which was dead, and packed over the placenta. The patient died of absorption ten days after. I have since thought that had I, after opening the abdomen, made a free opening through the vagina, I might have saved my patient. This was eight years ago, and we have all learned something since that time.

I have about exhausted my allotted time, and will only add that I believe that there is no condition in the abdominal cavity, which demands greater care in diagnosis and greater skill in procedure than ectopic gestation.

#### Discussion.

Dr. I. B. Perkins: There is one point that Dr. Stoddard brought out in his paper I would like to emphasize, namely, if the rupture in tubal pregnancy occurs quite early, it is very apt to be near the uterus. In cases where the rupture occurs very near the cornu the hemorrhage is most severe, and the patient is more apt to succumb before an operation is done.

There is one point which I have noticed and have spoken of it a time or two, and that is, I believe that tubal pregnancy may occur in a perfectly healthy tube in this way: A woman believes herself pregnant, she having passed a short time beyond her expected menstrual period. She takes some medicine, which contracts the uterus, with the idea of causing it to expel its contents, and while

in the contracted condition the ovule reaches the cornu, finds the uterus contracted, and its caliber lessened, so that it cannot pass through, it having previously become impregnated by the spermatozoa after traveling up the tube. It takes but a short time only for the impregnated ovule to implant itself wherever it stops, and before the patient has ceased taking her medicine to produce contraction of the uterus, while the uterus is in that contracted condition, the ovule implants itself and enlarges sufficiently so that it cannot then pass through. Soon after that a rupture is very apt to occur. I have had several of those cases and have made this observation in them.

Dr. A. R. Pollock: In a practice of a little over eight years it has been my fortune to meet with two of these cases, both of which were operated, and recovered. They were both cases of so-called tubal abortion. In the last case the woman had a pelvic abscess one year preceding ectopic pregnancy, and her tubes were constricted in places. There were adhesions, and since that case I have come to believe in the old-fashioned idea of strictures in these tubes being a causative factor.

The essayist mentioned one point in connection with the diagnosis that I wish to refer to. If I understood him correctly, he said he would not pay much attention to the temperature in less than twenty-four hours. It is an important point in diagnosis, if we get the case at the time of the collapse, or somebody has been there with a thermometer and finds a subnormal temperature.

With reference to operating in these cases, either by the abdominal or vaginal route, it seems to me that unless one is certain that the fetus is dead he is not justified in operating by the vaginal route on account of the danger of hemorrhage. The abdominal route is certainly the safest of the two.

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### PERITONEAL DRAINAGE.

By D. P. MAYHEW, M. D., Colorado Springs, Colo.

The question of how the peritoneal cavity should be treated when soiled seems to be one of those technical questions for which there is not as yet any unanimously adopted answer. The surgical literature of the day is filled with ac-

counts of precisely similar operations in which the abdomen has been flushed with saline solution, mopped out with dry sponges or with sponges bearing 1-500 bichloride solution or not mopped at all, after which there have been inserted gauze drains, rubber tubes, glass tubes, or nothing at all, and the wound either not closed at all, partly closed, or sewed up tight.

During the last few years certain American surgeons, among them notably Murphy and Fowler, had been doing work which was apparently getting us on the right track. It seemed almost as though we were having at last formulated for us a set of rules which, applied with common sense, would get us out of the great majority of our difficulties connected with infected peritonea, when Yates threw a nihilistic bomb into our midst by telling us, and apparently proving his assertion, that we could not drain the peritoneal cavity, any way, so what was the use of trying.

However some of us, by following certain rules combining old procedures, have attained to the satisfaction of seeing our mortality rate drop considerably; a great satisfaction even though our figures be called in question or duplicated by adherents of other methods.

In view of the foregoing it may not be wholly amiss to consider the rationale of the matter, and so, by stirring up discussion, help to crystalize a common method of working which will give us the best results. I do not wish to refer to those cases of well-walled-off abscesses within the abdominal cavity, which, as a matter of course, it seems to me, are to be treated like abscesses anywhere. I would confine myself to the discussion of those cases in which for any reason the whole of the abdominal cavity may have been infected by the introduction into some part of it, not sep-

arated from the rest by adhesions, of germ-containing matter.

The problem is, obviously, to remove or destroy the infection and its products, to limit the area infected, and to isolate that area.

The means at our disposal for the first aim, that of removing or destroying the infecting material, are obviously limited to saline solution, water or sponges for washing or wiping it away and the employment of chemical antiseptics to destroy it. Sponging the peritoneal surfaces which have been infected seems as irrational as the curettage of an abscess cavity. If nature has done anything at all for defense she has deposited on the peritoneum a coating of coagulated lymph which clogs the lymphatic openings and retards absorption. To mop the surfaces certainly removes this coagulum and as certainly does not remove the whole of the germ growth. If any of the latter is left it might as well be all left as far as sterilization is concerned.

In a few cases, such as perforations of the stomach or intestine, in which a considerable quantity of germ-bearing material has been widely distributed throughout the abdominal cavity the employment of saline solutions would seem to be the only rational procedure, to the end that the grosser particles of food or feces should be removed and prevented from acting as persistent foci of infection. The routine use of such flushing, no matter how carried out, appears irrational. In most cases in which the peritoneum is soiled the foul matter is small in amount and, if left to itself, would spread over a comparatively small surface which, as a rule, would soon be isolated by the natural reaction of the parts in the way of fibrous exudation and adhesion formation. If, however, the belly is washed out with quantities of water or saline solution, we defeat this effort of nature. As Walter

Vaughn has recently pointed out (*Jour. Am. Med. Ass.*, Vol. 46, p. 778,), we cannot wash out all the filth, but instead make a thin suspension of it which is carried to well nigh every portion of the belly cavity, there to start up its baleful growth. Instead of permitting it to grow in a small locality soon to be isolated as a culture grows in a test tube, we plant it widespread over all the peritoneum to set up the enormous growth to be seen in his father's typhoid tanks.

That Vaughn is right in his contention is proven by the results. LaConte quotes the mortality cases of peritonitis treated in this way at the Pennsylvania Hospital as 70 to 80 per cent (*Annals of Surg.*, Vol. 43, p. 231). Even-tration even if it were permitted by the absence of that shock which invariably follows, would offer us no better results, for the fact remains that simple flushing will not wash off all the organisms, but will simply disseminate them. The use of chemical disinfectants in the way that salt solution is employed is of course and for obvious reasons not to be thought of.

If, therefore, we cannot remove or destroy the infection our problem is narrowed down to that of limiting and of isolating the infected area and of removing the products of infection. This done we have to deal not with a peritonitis, but with a simple abscess in the abdominal cavity, which may be drained as may any abscess. In the great majority of cases nature assists us by throwing out plastic lymph about the invaded area, preventing the spread of the germ armies. In a few cases she does not, but tamely submits to being overrun. In those cases our work is made more difficult, but the problem is essentially the same. We have an abscess cavity to drain, but instead of a small one, we have to deal with one which embraces the whole, or a large part, of the peritoneal cavity.



What are the available means for the attainment of our object? They are few in number and very simple. Chief of them is the Attraction of Gravitation, which we utilize through the well-known Fowler position. It is customary in the history of progress for things to be done wrongly at first, no matter how obvious the right way may be after it has been found, so in the case of utilizing gravitation in peritoneal infections, the wrong way was tried first. The patient's head was lowered with the idea that the natural flow of the peritoneal fluids being toward the diaphragm this position would favor that flow. It apparently did, for the patients mostly died, killed by the rapid absorption of the toxines produced in their bellies. In 1900 the right way was pointed out and the patients were propped up almost upright in bed. This position brings about two things; it makes more difficult and slow the absorption of bacterial products and it promotes the localization of the most active focus of bacterial growth in that locality whence those products can be most easily removed from the body; namely, in the lowest pouch of the peritoneum.

That position will have a chance to so influence the localization is a priori evident, but receives confirmation from the fact that in many cases of stomach perforation operated upon within an hour or two of the occurrence of the accident, it is not uncommon to find the stomach contents widely spread throughout, but more especially along the ascending colon and as far down as Douglas' cul-de-sac or the recto-vesical fold. If this material can so move it is obvious that other infective fluids can also. This of course before adhesions have formed. In the absence of adhesions you all know how ascitic fluid quickly changes its level with changes in position. With the formation of adhesions another principle comes in. I will return to this later.

The other means at our disposal for attaining the aim of limitation and isolation is some form of drainage, either tubular or capillary. This brings us naturally to the consideration of the applied value of laborious and praiseworthy experiments of Yates' peritoneal drainage, which were so nihilistic in tendency, so pessimistic in outlook. He showed that in dogs with normal and with infected peritonea the relative encapsulation was immediate. That is to say the intestines plugged the openings of the tube at once. That the absolute encapsulation, by which he means adhesion formation, occurred in less than six hours, and that in three days the adhesions became organized. His conclusions were that drainage was a physical impossibility, and in fact lessened the vitality of the neighboring structures and made them more liable to the inroads of germ life. He concluded also that postural methods are of no value. His dogs were not caused to assume any definite position nor were the drainage tubes or gauze placed in any definite locality, but were merely inserted. These facts open up numerous lines of questioning for the cross-examiner, but just at present we will grant the truth of his observations. What bearing will his facts have on our problem? I believe none at all, and for the following reasons.

From whatever cause it may arise, virulence of germ, resistance of the body; quantity of infective material or increased opsonins, we have to do in general with two classes of cases, those in which there is little or no attempts at walling off by adhesions on the part of the peritoneum, and those in which there is such an effort. Whatever the cause, from a mechanical point of view, these are the two divisions of importance. The first of these divisions is the one which includes the cases of generalized peritonitis; those cases which more than any

other imperitively demand drainage. It makes no difference what the cause of the condition may be, the problem is to remove the products of bacterial activity and prevent the poisoning of the patient. Now these cases, it is evident, had no representative among the dog experimented upon by Yates, for they all promptly got adhesions about the drainage. Therefore his experiments have no bearing on at least one class of cases.

As a matter of fact clinical observation, which, if properly made, is at least as important as the observation of experimental cases, shows us that patients having this condition in their bellies, if placed in Fowler's position with drainage to the lowest part of the cavity, will continue to discharge pus or serum into the dressings for a greater length of time than the maximum of Yates, and in quantities which preclude the idea of their being discharged from a small cavity about the tube. And why should this not be so. It is as simple as that water should seep through a straw. Gravity pulls and there is nothing to resist it but the capillarity exerted by the closely approximated surfaces of the intestines. The intra-peritoneal fluids must run down hill to the lowest part of the peritoneum where they will be removed by our properly placed drainage.

Now it may be asked how is this to benefit the patient when we know that much surface is still exposed to the toxic fluids which are drawn upward by capillarity. I believe this benefit will arise from at least three causes, two of which have been already mentioned; the reversal of the natural flow of the fluids towards the diaphragm, the decrease of the intra-peritoneal pressure caused by the removal of the fluid as fast as formed, and the formation of a coagulum over the gut surfaces which blocks the stomata of the peritoneum and prevents absorption. The formation of

this coagulum is promoted by the removal of the excess of the bacteria which otherwise would digest it. Those cases which are to recover will show more than this. In a few days adhesions will begin to form and they pass from our first division into our second.

In this second class of cases there may be no adhesions at the time of operation, for that interruption to the course of events may have taken place before such could form. The power to form them is, however, still there. This corresponds to the condition present in Yates' dogs. Must we agree that in these cases any attempt at drainage is useless or worse? Let us examine the course of events and see. Before adhesions form the patient is placed nearly upright. In a few hours or less most of the soiling fluid, if large in amount, has gravitated to the rectovesical fold or Douglas' cul-de-sac. If small in amount, probably the greater part is held by capillarity in the vicinity of its origin. At the end of six hours tenuous adhesions begin to form around the drainage and also among the infected loops of intestine. Everywhere there is a certain amount of pus formation. This everywhere increases amidst the adhesions, some of which must yield. Now which will yield? Evidently those against which is the greatest pressure, since all are of about the same age and strength. Those to yield are of course the lowest, for those have to bear the weight of the pus as well as the pressure due to its gradual collection. The pus will then travel downward, as does that of a psoas abscess, and will finally come to the lowest part of the cavity where the drainage is placed. The track will close behind it as the gut rapidly expands to fill up any space and the abscess will have reached the vicinity of the drainage, and will be obliterated as fast as the balance between the destructive effects of the bacteria and the tissue resistance will

allow. That part we cannot, as yet, directly control, but we shall have the satisfaction of knowing that we have placed a heavy handicap on the bacteria.

The drain of whatever form employed should, it goes almost without saying, be placed where it will be able to carry off the fluids from their collecting place, and pass through the abdominal parietes at lowest available spot. This means of course that from Douglas' cul-de-sac the tube or gauze should pass out by way of the vagina, perhaps also through the abdomen, and from recto-vesical fold should be brought out through the abdominal wall immediately above the space of Retzius, even if another opening has to be made for it.

Another advantage of the upright position here manifests itself. By it the flow out of the drainage channel is in the one case almost directly downward, in the other nearly level, instead of being either horizontal or vertical.

The form of drainage has by no means been settled. As yet each of us can but state his individual preference with the reasons. Personally I prefer for strictly drainage purposes the rubber tube of large calibre to glass tubes or gauze, for the first I believe increases somewhat the danger of necrosis of the gut and the other does not drain pus. In the presence of that substance its capillary action ceases, and instead of a drain we have a cork. If, however, we wish to isolate some particular area, gauze is, as Yates pointed out, most useful. I believe if used for drainage, it should be protected from actual contact with the peritoneum by gutta percha tissue or rubber, as in the cigarette or split tube drains, and in this form it is often advantageous to employ it alongside an empty rubber tube.

There are, of course, other measures which aid in the struggle against peritoneal infections but which are in comparison with these two, position and drain-

age, of less importance. Such are the use of large enemata of salt solution and the prevention of peristalsis by the withholding of food.

These are the reasons as I see them for this mode of drainage; the philosophy of the facts that we observe. But it is after all the facts that convince, that give us the ultimate proof of the correctness of our logic. In a paper in the *Journal of the American Medical Association* for August 26, 1905, S. J. Young collected the methods and results of fifty surgeons in treating diffuse peritonitis. There seems to be no difference of opinion on the value of the Fowler position or on the question of free drainage, though all do not employ the same method of the latter. Irrigation is favored by fifteen while ten oppose it. These fifteen report 252 cases with 199 deaths; a mortality of 79 per cent. The others report ninety-two cases where irrigation was not employed. Of these eighteen died, a mortality of 19.5 per cent. J. B. Murphy reports thirty-three cases with but one death, using Fowler position, no irrigation nor handling of viscera together with the copious use of saline enemata and anti-streptococcic serum. I think it is safe to say that his figures have never before been equalled.

I myself have had seven cases, which were treated as above except that no anti-streptococcic serum was employed. Among these there was one death, giving a mortality of 14.3 per cent. This one death which spoils my record was in a case desperately ill with phthisis who had a sudden pain in the appendiceal region which was diagnosed as appendicitis. She was operated within twenty-four hours, but on incision a hole in a gangrenous caecum as large as a dime was found, together with a gangrenous appendix. The abdomen was full of feces, which were washed out and the ap-



pendix and part of the caecum removed. The patient died on the fifth day. The other cases, none of which were irrigated, were of the fulminating type of appendicitis, except one which was a case of ruptured pyosalpynx.

In view of the foregoing reasons, emphasized by the facts quoted it would seem that the indications in these cases are best to be met:

1. By rapid operation with as little handling of the abdominal contents as possible even to the point of allowing the original focus to remain if not easily and quickly removable.

2. Drainage in the Fowler position by means of tubes or gauze, or both, brought out at the lowest available point and reaching the lowest pouch of the peritoneum.

3. Copious salt solution enemata 3-4 pts. in twenty-four hours.

4. Prevention of peristalsis by allowing nothing by mouth.

If these procedures be faithfully followed we may hope to keep our mortality down to a comparatively low point.

#### Discussion.

Dr. W. W. Grant: This question is being threshed over and drainage is still being practiced throughout the country by the best surgeons. There is no question but that the poorest material for drainage is gauze, except for a few hours. Gauze, when once soaked, no longer drains. For the purpose of protecting drainage tubes and permitting adhesions to occur in circumscribed area, it may for a short time be useful, but for drainage it should not be used longer than twenty-four hours. I do not believe the profession seriously takes the view that Dr. Yates' opinion can be sustained. We have too much common experience to justify the statement that drainage is not only useful, but absolutely essential in many cases. Drainage by tube, rubber tube, is preferable. I prefer those that are wrapped with gauze, and then tissue cloth over them, in this way preventing adhesion, rendering them easy of removal, and having, for a short time, a little capil-

lary drainage, with the tube or tubes patent at all times.

I have never feared the use of irrigation in these abdominal cases. Ten or fifteen years ago I observed Knowsley Thornton never used irrigation, at least at that time. He simply wiped out the peritoneal cavity as well as he could, and then proceeded with the ordinary drainage tube, or not at all. We must remember, that while the leucocytes will take care of a good many infective bacteria, yet we may leave too much for them to do if we do not remove thoroughly the focus of infection. I, therefore, believe it advisable while draining to remove all the focus of infection, and if deemed necessary, I do not hesitate to use normal salt solution in the abdomen freely. If this is done quickly, and then drainage tubes applied afterward, what is left of the salt solution in the abdominal cavity is, by absorption, of some benefit. Its influence on the kidneys in causing a freer excretion of urine is important. Many use it (slowly) through the rectum, many by hypodermoclysis. I have not in my own personal experience, nor in that of others observed, any ill effects from its use in general peritonitis, especially where there is no circumscribed abscess, and the parts are not protected by adhesions. I have not seen harm come from liberal use of salt solution in the septic peritoneal cavity, and then draining by tubes in the Fowler position, I think there can be little question but that this is really the best, the most scientific form of, treatment of general septic peritonitis, draining not only the site of the disease, but in the most dependent portion of the abdomen, using the recto-vesicle cul-de-sac and making, if necessary, additional incisions above the pubes and in loins for this purpose.

Dr. Leonard Freeman: While I did not hear the paper, I think I have some notion of its contents, which were told to me by Dr. Mayhew.

I think the main distinction to make in treating cases of general peritonitis is as to whether the peritoneum is seriously injured or not. In cases of fulminating appendicitis, in cases of rupture of the gall bladder, and in cases in which pus-tubes have been recently ruptured, during the first few hours, the peritoneum is but slightly damaged. During this time the treatment is entirely different from what it is later, after the peritoneum has lost its gloss and has become seriously damaged. In these first hours I feel sure that the best method of treatment is not to drain at all.

I thoroughly agree with Dr. Grant that I have seen no harm come from using salt-solution in the peritoneal cavity. I have had to operate upon quite a number of cases of fulminating appendicitis; I intend to look them up for this occasion, but did not have time to do so. I have treated them all in one way, that is, by removing the appendix with as little traumatism and exposure of the intestines as possible, and washing out the peritoneal cavity with normal salt solution; not only at the site at which the appendix was ruptured, but the entire peritoneal cavity. Particular attention was paid to the lateral pouches and to the pelvic pouch, and the cavity was left full of salt solution, and sewed up tight, with drainage of the external wound only. Having washed out all the pus, fecal material and concretions through the external wound, that wound is bound to suppurate hence drainage should be provided for externally. In treating cases in this way, I have never lost a single patient from peritonitis, while unfortunately in two or three cases that I have seen treated otherwise and have treated myself, otherwise, I have seen death result from general peritonitis. I believe that the explanation probably is this: The peritoneum is able to handle a considerable amount of infective material, and particularly is this true if it is spread over the entire peritoneum instead of being concentrated in one spot. The salt solution washes out considerable infective material—of course, not all of it—and spreads the rest over a large area where the peritoneum can handle it better. In addition, according to Mikulicz, leucocytosis is increased by salt solution in the peritoneal cavity, and, also the absorption of this solution by the circulation stimulates the patient and enables him to resist the invasion of bacteria. But after the peritoneum has been severely injured, when there is a tendency to glueing together of the intestines, when the gloss of the peritoneum is lost, when we feel sure it will not be able to handle the infective material, then comes the time for drainage.

I agree with Mayo, that one of the most important things is to produce as little traumatism as possible and to handle the intestines as little as possible. It has been shown by experiments that it is the handling of intestines which produces paresis, rather than exposure to the air, or drying, or the presence of salt solution. I believe that the best method we have at present for treating peritonitis, after it is thoroughly developed, is by making a

suprapubic opening, inserting a tube of large size with a wick of gauze in it to prevent the intestines from working into the tube, and placing the patient in the exaggerated Fowler position.

Dr. Coffey, of Portland, Ore., in an interesting paper, which he read a short time ago before the Western Surgical and Gynecological Association, called attention to the fact that the ordinary Fowler position of 45 degrees would not drain the lumbar pouches into the pelvic pouch, because the lumbar pouches were lower than the pelvic pouch. He advocated sitting the patient straight up. If there is any truth in this, and I think there is, it contradicts the idea of some surgeons that they can elevate the head of the bed enough to produce drainage into the pelvis. If any advantage is to be gained by elevation of the trunk, it is by putting the patient in a decided sitting posture. To get the same amount of inclination you would have to incline the bed almost perpendicularly, which would be difficult, to say the least.

Dr. Charles A. Powers: This subject is always timely and always interesting. The question of whether or not to drain has bothered me more than the question of how to drain, and my own rule, and one which has been satisfactory thus far, has been as follows: There are perhaps three classes of cases. In the first class, we are sure we must drain. In the second we feel reasonably certain we should not drain. In the third, or intermediate class, we are uncertain as to whether to drain or not. In the latter class I have followed the rule of draining the uncertain cases. I am very well aware, however, that many surgeons, perhaps gynecological surgeons rather than those in general practice, take the opposite view and, when in doubt, close the abdomen. Personally, I believe this uncertain class should be drained.

Dr. H. G. Wetherill: In the matter of abdominal drainage certain things are being worked out to what seems like a rational if not an ultimate conclusion. It is a fact that the gauze drain, so-called, scarcely drains at all; that gauze drains are practically tampons. A second fact which seems to be established is that cigarette drains drain for only a limited time, that the peritoneum closes in about them, and the space of peritoneal cavity from which such drainage takes place is limited to an extremely small area. Now, if we are to accept these principles as correct, or anywhere

near correct, it makes a great difference as to the indications for drainage. Personally I have brought the matter of drainage down to narrow limitations. I do not drain at all excepting by tubes or by packs of gauze which are used more in the nature of a tampon to wall off infected areas or to arrest oozing. These are run through the vaginal vault or through the peritoneum at the lowest point of the peritoneal cavity. Drains from above, which are expected to drain up hill are practically useless.

Furthermore we must remember the excellent results which have followed the use of the Ochsner method of treating certain advanced cases of peritonitis where the abdomen has been distended and the case declared too far advanced for operation. These demonstrate the ability of the peritoneum to take care of a high degree of infection if the intestines are kept quiet and the patient is not fed and no peristaltic action of the intestines is permitted. Now, if this condition of things obtain when the abdomen has not been opened, and when no operation has been done, why should it not when an operation has been done? Why not do as has been suggested, simply make a small incision, go into the abdominal cavity as quietly and easily as possible, pick up the focus of infection and remove it; the appendix or tubes, or whatever it may be; get it out with little disturbance to the peritoneal cavity, leaving the exudate which is in the peritoneal cavity alone for the peritoneum to dispose of. This sounds to some like rank heresy; yet we all know that certain men have been doing this thing for a number of years, with the best results. If the peritoneum can take care of this infection before the abdomen is opened, and during one of the serious attacks, it can take care of it afterward. The use of salt solution and gauze drains in various directions in the peritoneal cavity impair the chances of the patient for recovery by just exactly that much.

Dr. Freeman has alluded to another matter which bears on this particular question, and that is the ability of the peritoneum to take care of infection. Take a case such as we have been talking about. He tells us that we must put in a small drain to take care of the superficial infection. How well we all know that this is necessary. The peritoneum will take care of its infection and will close up tight, but in nine cases out of ten we have infection in the superficial wound.

Dr. Frank N. Cochems: In coming to a conclusion in the matter of drainage, it is very essential for us to differentiate between what cases to drain and what cases not to drain. President Wetherill has just said that our ideas are becoming crystallized in regard to this matter of drainage. I hardly believe that. The fact that we all have different opinions, such as have been expressed here, regarding the question of drainage, shows that we have not settled this matter. The question seems to be settled more with reference to the treatment of acute diffuse peritonitis rather than acute peritonitis, and what to do with those cases which come to us and look as though they were inoperable. What are we to do? Reference has been made to Dr. Murphy, to Dr. Ochsner, and the Mayos, and their methods. Murphy puts in a tube. The secret of Murphy's success seems to be due to the small amount of handling of the contents of the peritoneal cavity, the low drainage, and the great quantity of salt solution he puts into the bowels. Dr. Charles Mayo says that four-fifths of all the fluid that is injected is absorbed by the large bowel, and holds that Murphy's idea is correct, that a great quantity of fluid is taken up; that the stomach is not irritated, and the small bowel is allowed to be at rest. I have followed that method of treatment in some cases of peritonitis. I have followed the Ochsner treatment absolutely. I do not think there is a single treatment that I have not followed out. I have also followed the salt solution treatment, filling the abdominal cavity with salt solution, and closing it tight. But I think if I were confronted with a case today, after considering all the different treatments presented in these inoperable cases, I would employ the Ochsner treatment; I would not enter the abdominal cavity at all. I would place the patient in the Fowler position, and give salt solution per rectum.

In speaking to an assistant of Dr. Ochsner's (I cannot recall the gentleman's name), he said that practitioners, as a rule, do not use the Ochsner treatment as it is advised by Dr. Ochsner, and a great mistake is to use the Ochsner treatment in association with the Fowler position. Practitioners make a mistake by giving the patient some water, even a tablespoonful, and this was a point where practically all fell down. The Ochsner treatment meant absolutely nothing given by the stomach; morphine sufficiently to control pain, and rectal feeding. In my own experience I can look



back and see that when a patient begged for water, I gave him some, and in resorting to the Ochsner treatment at that time I had trouble. Since that time I have avoided giving anything by the stomach and have followed Ochsner's ideas more thoroughly.

There is one point in regard to the use of the Fowler position that has not been spoken of. I used that position in a case of diffuse peritonitis. The patient was a boy, fourteen years of age. It was a very acute case. The patient's condition subsided somewhat, and abscesses had formed in the pelvic region. I went down and drained. The patient did very well. I kept him in the Fowler position, and after a few days there was elevation of temperature and pulse, with symptoms of obstruction and general sepsis. I felt confident I had an abscess in the left iliac region. The tube was long, and the incision was over the appendix, that is, the primary incision. Apparently the tube was efficient for drainage. There were dullness, tenderness, and swelling in the left iliac region. On cutting down I found not what I expected, an abscessed cavity, but a mass of thickened intestines, so thickened and infiltrated, with such an amount of cellulitis, that it produced tenderness, swelling and pain, and simulated absolutely an abscess. No pus was found. Drainage had been complete; but the patient succumbed. I believe that the explanation for this is that the patient was kept in the Fowler position too long, and the edema, which we always find in the lower extremities after maintaining the Fowler position for any length of time, had extended upward and into the abdominal cavity, involved the intestines, started a cellulitis, and destroyed the life of the patient.

The results of Dr. Murphy, of one death in thirty-three cases of diffuse peritonitis, are remarkable; but Dr. Ochsner's assistant told me that they had had ninety cases without a death, following absolutely the Ochsner treatment.

Dr. Mayhew (closing the discussion): I would disagree with what Dr. Wetherill has said in reference to our having no evidence to show that this is infective material. The facts which he quoted a short time ago in connection with those cases in which we get infections of the abdominal wall show there with some infective material there.

As to the use of salt solution, which Dr. Freeman has praised, personally I should

rather be inclined not to employ it for the reasons mentioned in the paper. It is true, in a certain number of cases we get results from it; but I think the opinions of a large majority of surgeons will go to show that the irrigation method is not the best. The benefits which we derive from placing a large quantity of salt solution in the abdominal cavity by way of stimulation of the patient can be attained as well by Murphy's method of injection of a large quantity of salt solution. This method of using copious enemata is not, by the way, strictly Murphy's. It has been used by others for many years, but Murphy should be given credit for bringing it prominently before the profession.

As to the Ochsner treatment in these cases, there has been a good deal of misunderstanding. Ochsner does not say that the abdominal cavity should not be opened, and, as a matter of fact, when pus has collected, Ochsner recommends opening and draining it. His contention was merely that in cases which had passed the period of safe operation, should not at once be subjected to the knife, but should be kept quiet, and so treated that peristalsis should be kept at a minimum.

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### *THE SWING OF THE PENDULUM, OR THE RENAISSANCE OF INTERNAL MEDICINE.*

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The prominence given to that part of the healing art represented by operative procedure during the past twenty-five years renders it necessary to define internal medicine as that other part of the healing art, embracing all other means of treating disease; in other words, it will be considered here in the broad sense; as the practice of medicine, in contradistinction to that of surgery. None can dispute the fact that for the past twenty-five years the swing of the pendulum has been to surgery, and, quite naturally so, since its achievements and advances have been brilliant in the extreme. The purpose of this paper is in part to find an answer to the query as to whether this extreme swing of the pendulum has

been fraught only with good or whether it has not had a tendency to cause the graduates from our medical colleges to minimize the advances in internal medicine, which have been phenomenal, and thus, in a measure, relegate to the rear, for a time, a branch of the healing art, without the aid of which surgery could never have attained the proud position it now occupies.

Perhaps the most unfortunate result has been the creation of distinctions where none exist and the substitution of a *dernier resort* for legitimate antecedent procedure. The observance of the old, unwritten law, that no physician is equipped for practicing a specialty without some years of general practice, is too often the exception rather than the rule. Every surgeon should first be a physician. Among the older and more prominent surgeons of the present day there is even now probably no dissent from this first theory nor from the further statement, that all specialists should graduate from the ranks, so to speak, after ample experience as general practitioners.

The practice of surgery has become so attractive to graduates in medicine during the last two decades that their best energies are given to its study, with the result of a neglect of internal medicine, possibly, in many cases, and the graduating by medical colleges of specialists instead of physicians in the true sense of the term. This will apply to only a small percentage of the graduates of the period named, but, in the aggregate, the number is large and the result bad beyond comprehension. With surgery as the craze and internal medicine in a sense neglected, these young men go from their *Alma Mater* with the fixed idea that, as surgeons, they are fully equipped as internists. This idea is generally eliminated by experience. In this they are in

a great measure blameless. Spectacular achievements catch the public eye. The laity see results and are correspondingly impressed. A difficult differential diagnosis, furnishing a basis for life saving internal medication, is doubly discounted by the amputation of a leg and spectacular effects rule the day.

The remedy would seem to be a reform within certain limits in teaching methods in our medical colleges and the education of the public to the point of intelligent discrimination in matters pertaining to the profession. Can these reforms be inaugurated? I think the seeds have already been sown and the full fruition is even now assured in the shape of a Renaissance in Internal Medicine which will place it upon grounds so advanced that the opposite swing of the pendulum will be as pronounced as it is now in the other direction. What the conditions are that will bring about this result will be discussed further along in this paper.

Not the least of the attractions of surgery for the young man of today, and for long years past, is the fact that it is far better recompensed as a rule than the practice of internal medicine; and, here it seems to me, the extreme swing of the pendulum has been attained, which, unless signs fail, will soon be followed by a radical reaction. Not that the surgeon is begrudged his fee—not that he should have less, but that the internist should have more. The surgeon claims, and justly, too that his work is life saving in those cases paying large fees, and should be recompensed accordingly. When the internists take the same position their claims will be better recognized and none will support them more loyally in such a course than the surgeons. But construct theories as we will—urge the claims of the internist as we may—the plain unvarnished fact stares us in the face that his claims have here-

tofore been too much ignored in referred cases.

What could be more unjust than that in a case where the general practitioner makes a few visits, diagnosis a case, say of appendicitis, perhaps after considerable worry; then calls the surgeon, who operates and receives \$250, while the general practitioner receives possibly less than one-tenth of that amount. Here is evident injustice. But how is it remedied? The patient is not expected to pay \$500, and yet he must pay much more than he does or an injustice is done some one. The surgeon says he is not overpaid, and no one disputes him; the general practitioner's services have been equally life saving with that of the surgeon; for his patient's life perhaps depended on his skill in making the diagnosis and knowing when to call the surgeon, or refer the case to him. In such a dilemma, it seems there would be no way to turn had not surgeons here and there all over the country, by a surreptitious practice, pointed the way to a solution of the difficulty. I speak of surgeons because most referred cases go to the general surgeon, but, in the practice referred to, all classes of specialists seem to be equally culpable. Perhaps none will deny that here and there a surgeon clandestinely offers to divide the fee with the internist in referred cases. This is a tacit admission that half of the fee will do if he can get no more. Personally I know of but few such cases, but heretofore they have been entirely too numerous and the patient's interests too often sacrificed to the Moloch of greed. Such a combination serves to create quite a demand, perhaps, for that particular surgeon's services at good prices; for it is evident that one object of the combination is to limit competition.

It is evident that this practice is fraught with evil in at least three different directions.

1. The general practitioner is bribed and is equally guilty with the surgeon;

2. The interests of the patient are sacrificed, and,

3. The ethical surgeons are discriminated against.

The remedy is a fair and open division of the fee upon an equitable basis. Nothing but a general rule can be laid down. I do not think an equal division is just to the surgeon. He should deduct first the usual charge for the operating room and the anesthetic and also the cost of all materials used in the after dressings, after which, in operations where the fee is \$100 or less the internist should have one-half, and in operations for which the fee runs from \$100 up, one-third. The patient need not know details, but when he is informed what the surgeon's fee is to be he should be informed that it also covers the services of the general practitioner, the fee for the operating room and anesthetics as well as the cost of materials for after dressings. Such a course, openly followed by all, would do away forever with this vexed question, and, it seems to me, would be just and fair to all concerned. The conditions antecedent to a renaissance in any line of human endeavor or avocation are generally bad, and of their very badness is born the necessity for reform. The extreme swing of the pendulum in one direction must be attained before the inauguration of the opposite swing. The ignorance of the public with reference to medical matters has always been the chief factor in the creation of these conditions, so far as internal medicine is concerned.

Internal medicine, far more than surgery, has had to fight popular ignorance and superstition. The public may be made to believe that a quack nostrum will cure almost anything, but readily admits that the knife is the only rem-



edy for a gangrenous extremity; and thus it has stood for ages as a bar to the progress of internal medicine. Reinforced by all the "isms" and "pathies" born during the last century the acme of its mischievous influence has been reached in the last two decades, the last two years of which mark the beginning of its decadence. The education of the public, inaugurated by *Collier's*, *The Ladies' Home Journal* and other lay journals, has already borne fruit in the passage of the *Pure Food Bill* by Congress, and the work of education is, as yet, only in its embryonic stage. How much the profession is to blame for these antecedent conditions is not hard to estimate when all things are considered. Prescription writing bade fair but recently to take its place as one of the lost arts. Our medical colleges today are woefully deficient in the matter of teaching it. The average graduate in medicine finds himself handicapped at the bedside by his lack of education in this respect, and welcomes the proprietaries as an aid in his dilemma. Gray's Tonic, Fitchmul, Sanmetto, Resinol ointment, and a thousand other, more or less, very generally less, ethical proprietaries are furnished ready to his hand and the accommodating average medical journal, for a consideration, furnishes the literature. Not only the young men, but old ones as well, prescribe these proprietaries, and if they ever did know their composition, they lose sight of it after awhile and go ahead blindly until such a thing as writing a scientific prescription is beyond their ken.

Thus had prescription writing fallen into disuse until the reform began, of which more a little further on.

Physicians doing contract work, another curse which there seems no way to eliminate, use samples of proprietaries as a matter of economy until the habit

becomes so fixed that it extends to their private practice as well, and thus they drift insensibly farther and farther from a scientific therapeutic basis. The responsibility for this state of affairs rests largely upon the medical colleges. The failure to emphasize therapeutics and prescription writing leaves the graduate more or less at the mercy of the proprietary manufacturers, and they have not failed to improve the opportunity. The drift has been from a scientific basis to a haphazard, empirical line of treatment, and physicians have been more responsible than any one else and seemingly bid fair to be the last in the work of reform. Notwithstanding some effective work by a few medical journals and comparatively a small number of physicians here and there during the past few years, it must be admitted that the all important work of educating the public has been done mainly by a few lay magazines supplemented by a very few secular papers. All over the United States hundreds of thousands of intelligent men and women know what the "Great American Fraud" is. The "Nostrum Evil" has received a staggering blow and the intelligent public is awake. There is no mistaking the signs of the times. Quackery and fraud are on the decline and their practical extinction is assured. When the profession is once thoroughly awake, and the unethical proprietaries are forced out of medical journals into the secular press they will meet with an educated public sentiment that will soon seal their doom. It will indeed be a jump "from the frying pan into the fire," and the fire will be all the more consuming because of its being kindled by the lay press. Physicians everywhere are insulted and outraged by so-called medical journals whose chief source of revenue is from the advertisements of unethical proprietaries. The time is not far distant when these journals must choose

between the exclusion of this class of advertising or the loss of their circulation among physicians. A large percentage of the profession is even now disgusted beyond measure with this class of medical journals.

Sometime in the not distant future concert of action will be attained and no journal that accepts such advertisements will be read by ethical physicians. Such are and were the conditions antecedent to the beginning of the reform which shall put internal medicine in a far more advanced position than it has ever before occupied. The real rejuvenating process has already begun. The profession must complete the work. This is really already being done. The work of the American Medical Association, through its council on Chemistry and Pharmacy, whose report is now being published, will sound the death knell of every unethical proprietary and nostrum now advertised in so called Medical Journals. What reputable up-to-date physician will ever hereafter prescribe "Somnos," and the fate of this one nostrum will be the fate of all similar ones. With the demise of each separate unethical proprietary there will be one step taken to the fore by internal medicine. The thorough organization of the profession in every state and territory of the union, a certainty in the near future, will be a powerful factor in the coming reform. Through this full concert of action is possible and the result will be that no medical journal advertising a questionable preparation will be subscribed for by any reputable physicians.

The *St. Louis Medical Journal* and the *New York Medical Record* are being deserted by the profession as rats deserting a sinking ship, and the good work will continue till physicians will read no journal that accepts advertisements from members of the proprietary association of America.

These are some of the signs of the beginning renaissance in internal medi-

cine. Many others might be mentioned but time forbids their discussion. A mere mention must suffice. The contrast between the general practitioner of the present day and of a quarter to a half century ago is full of promise for internal medicine. The man who does not read and work to keep abreast of modern advances is relegated to the rear. Old and young alike must measure up to the same standard. Internists everywhere are in the front rank and still pressing forward. Success is certain because it is deserved. Polypharmacy is a thing of the past. Fewer remedies are used and their use is more rational. New methods of treatment are coming into vogue constantly. Striking instances of these are the out door, or open air treatment of tuberculosis and pneumonia, over nutrition in chronic wasting diseases, and, above all, and more than all, the great advances made in therapeutics as the result of recent studies and researches in metabolism. The work of Van Noorden, Blumenthal, Ewald, Ebstein and a host of others is even now bearing fruit in the shape of improved and more rational therapy in diseases where formerly little rationalism prevailed. Improved methods of diagnosis insures a basis for improved methods of treatment. Internists of today are better diagnosticians than those of a generation ago, and advance in this line is steady. We are not afraid now to take our intelligent patients into our confidence and thus enlist their aid in the diagnosis and treatment of their ailments.

There may be a place for the "placebo," which I doubt, but certainly it is not with an intelligent patient. We want the aid of his intelligence but not of his superstition. The age of rationalism is upon us, and internal medicine is freed from its shackles and must take the advanced position to which its achievements entitle it.

This paper cannot be more appropri-

ately closed than by a quotation from Caille's introduction to his recent work, "The Differential Diagnosis and Treatment of Disease." He says: "I firmly believe that the family practitioner is not doomed to become extinct, and that in due time the people will again elevate him to the position of trusted family counselor. Much of the specialist's work of today is worthy of the highest praise; on the other hand a large percentage of operative work is ill advised, superfluous and harmful, and as soon as the more intelligent people of the community realize that such is the case they will again turn for advice to the intelligent family practitioner." Again he says: "I will venture to express the opinion that all medical men should start as general practitioners. If for any reason whatsoever they find it advisable to practice a specialty, they will be more generously informed and better equipped in every way by reason of years of general practice and experience."

#### Discussion.

Dr. W. F. Church: The essayist has raised many interesting points to me, and one of them is particularly interesting in that it deals with the question of division of fees. I am glad our president alluded to that question in his excellent address. It is a question that ought to be settled. It is a live question. There can be no doubt about that, for the reason that we know of surgeons who are not doing the square thing, and there are some practitioners who are not keeping faith with their patients. It seems to me, this question can be settled in a simple way. It can be settled by the surgeon, for the surgeon knows better. There are many practitioners, however, who are muddled and need to be set right. The surgeon has had education enough to know that he has no right to divide a fee except under certain conditions. The cause of this division of fees is the fact that the surgeon wants to increase his business above what legitimately comes to him, and the practitioner is unwilling to see so much go from the patient, part of which he thinks he is entitled to.

The referring of cases in one way can be

settled very easily. Let us suppose that a practitioner diagnoses a case of appendicitis, and in the same city a surgeon is called upon to do the operation, if that practitioner assists in the operation, and takes care of the patient afterwards, it is a simple and easy matter to put the fees together and inform the patient that he is paying for the services of both men. There comes up the instance where a case is sent to the city and the practitioner does not go along with it; he does not have anything further to do after referring the case to a surgeon. In such an instance, it seems to me he has acknowledged by that act that he has exhausted his resources; that he is unable to cope with the case, and is willing to pass it on to better hands. I fail to see in any way how he is entitled to a fee. If he makes a diagnosis of the case, and then send the patient to a surgeon to be operated on, he should receive pay for his diagnosis, the surgeon should not charge for the diagnosis, which should be one that is simply corroborative, but should charge for the operation.

In the matter of referring cases to specialists—if a case is sent to a specialist accompanied by a note stating that the practitioner wants the specialist to treat the case, or wants him to make a diagnosis and to recommend treatment, and he sends the case back to the practitioner to be treated, that is a very simple affair and causes very little trouble. The fact is we do have these cases. The fact is we have many cases that are sent out and the practitioner wants a part of the money he thinks he should receive. It seems to me, it shows that we need some general ground to stand on. I believe it is a matter of right and justice to the patient. The prospect of getting \$300 for a day's work is a strong temptation for some men to decide in favor of operation. There is no question but that with some men this is a strong incentive, but it does not sway the ideal surgeon. It does not move the ideal practitioner.

Dr. A. S. Taussig: I am absolutely in disagreement with Dr. Moore in the solution of this fee problem. It seems to me, no practitioner should be satisfied or content with receiving one-half, a third, one-tenth, or one-twentieth of a fee for services for, at or before on operation, but should demand it. We as general practitioners should learn to properly respect our services, and when we do that, we will have no quarrel with the general surgeon. We will not ask the general surgeon how much



we are going to charge; but we will charge so much for our diagnosis, and so much for our attendance, and I can't see that any amount of figuring is going to settle the problem. Take a case of acute appendicitis—how different that is from a case that we have watched over months. If we call in a surgeon in a case of acute appendicitis and ask him whether or not an operation should be performed, our remuneration for services ought not to be very much. But if we have been attending a patient for months or years, watching that patient closely, and finally come to the conclusion that he or she, as the case may be, has chronic appendicitis, and we ask a surgeon to operate on the case, we might demand one-half or perhaps more than one-half of the amount that the patient is compelled to pay. Or in a case of dilatation of the stomach we may have had under observation for a long time, we may finally conclude that the patient should have a gastro-enterostomy performed. In a case like that, I cannot see why the general practitioner should not receive more than the surgeon, even though the surgeon's services may be very skilled. The general practitioner, who has studied the case carefully and made the diagnosis, must be paid for his services, so that in settling this matter by giving a proportion of the amount the patient pays is not a settlement at all. It depends absolutely on the case.

There is one point the surgeon must consider; the general practitioner has been attending the case and has done a certain amount of work. If the surgeon charges a fee that practically compels that patient to work for years before he can pay it, the general practitioner's fee is apt never to be paid. The surgeon's fees must be commensurate with the patient's ability to pay him and pay his medical attendant as well.

I believe that an open discussion, free and above board, by the general profession in this state and the states throughout the country, will lead to a fairer and squarer settlement of this problem. I think in all circumstances, where a general practitioner receives a hundred, one hundred and fifty, or two hundred dollars, the patient should know the amount the general practitioner is receiving, and not simply know that he is paid five hundred dollars or a thousand dollars for his services.

A Member: There is one point I wish to speak of that Dr. Taussig did not touch on, and I did not hear the paper, and that is, not until the layman agrees with the general prac-

titioner that his services are nearly as valuable as those of the surgeon will he be able to get the fee to which he is entitled. In other words, it is the duty of the medical profession to educate the patient up to the value of the general practitioner's services. Just now, and for a long time past, owing to the brilliant advancement of surgery, men who can do the cutting skillfully can convince patients of the very great value of their services, because surgery is a material science; its work can be seen and felt. Yet the average layman cannot appreciate the high degree of intelligence that is required in diagnosis. So it is up to us to educate the patient and lay public up to the value of the services of the general practitioner.

Dr. Moore (closing the discussion): I have but very little to say. I simply enunciated a general principle in general terms to provoke discussion, not expecting that this society would reach any conclusion in regard to the details of the matter. Each individual case must be a law unto itself, according to the surroundings.

I have had a little experience with a very ethical gentleman who practices surgery in Canon City, and our arrangement has been openly and with the consent and knowledge of the patient as to the fee agreed on and to be paid, as I said in my paper, except the cost of material for dressings. These were not cases in which there were large fees. We arranged on that basis openly and with the understanding of the patient, and everything was satisfactory in two different cases, and that is all of them in which I have had any experience.

There are other instances in which patients are sent to an out-of-town surgeon. There the case takes on a different aspect entirely, and the case is simply transferred from one man to another because one has not sufficient skill in that line, and he (the general practitioner) is glad to get the case off his hands. It is in such cases where the abuse comes. That is what we want to get at—eliminate the abuse, and this abuse is not so much in the smaller towns in the state as it is in the larger cities. There are a few cases in Colorado where this matter has come up. My idea was and is yet partly, as stated by another gentleman in discussing this subject, that the internists do not place a proper estimate on the value of their services, and when they do, they will be more readily recognized, and I believe the surgeons will support them.

# Progress of Medicine

## INTERNAL MEDICINE.

EDITED BY

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William J. Baird, M. D.,

Boulder, Colorado.

### DIAGNOSIS OF TUBERCULOSIS OF THE KIDNEY.

(*Praeger Mediz. Wochenschr.*, No. 21, 1907). The value of early operative interference in tuberculosis of the kidney emphasizes the importance of an early diagnosis. For the general diagnosis intravesicle methods of examination are not absolutely necessary.

Tuberculosis of the kidney is often overlooked, but mainly because it is not looked for, the disease being supposed to be rare, but of Israel's operations on account of renal trouble, 13 per cent. have been for tuberculosis. It is not often that the general physical condition suggests renal tuberculosis. 55.7 per cent. of the patients gave catarrh of the bladder as the first symptom noticed, and altogether too often the physician is content with the diagnosis, "bladder catarrh," and does not look further for the cause.

Given a patient with bladder catarrh that is not directly traceable to gonorrhea or a dirty catheter, the first thought should be of a tuberculous kidney, and if bladder irrigations fail to give relief and there are functional disturbances out of proportion to the changes in the urine and diminished capacity of the bladder, and especially if there is hematuria, a sample of the urine should be taken by catheter and examined for the tubercle bacilli, and a negative microscopic examination should not be taken as conclusive; animals should be inoculated with the urine. If bacilli are found the patient should be referred to a surgeon, for in the great majority of cases tuberculosis of the genito-urinary tract means tuber-

culosis of the kidney and nephrectomy is indicated. Tuberculosis of the kidney is much more likely to be overlooked than primary bladder tuberculosis because often there are no symptoms of disease until the bladder has become involved.

The chemic analysis of the urine is rarely of value, the albumen present rarely being above that accountable for by the pus, and casts are infrequent. The clinical history is of the greatest value, especially if there are symptoms of kidney trouble, as renal colic, painful sensations in the upper and lower lateral abdomen, in the hip, thigh, chilly feelings in the lumbar region. In 70 per cent. of Israel's patients, the unilateral location of the symptoms suggested the kidney involved. Pathognomonic is pain in one side of the bladder, urethia, vagina, or in one labium.

Important is paroxysmal vesicle tenesmus, sweating and chills. Tenderness on pressure is not so common over the kidney as over the ureter, especially where it is accessible from the rectum or vagina, and most of all at its exit from the renal pelvis and where it crosses the linea arcuata pelvis. To determine whether or not only one kidney is involved, cystoscopic examination and ureteral catheterization are necessary, this exposes the patient to additional infection, especially if the bladder is involved, nevertheless the risk must be taken. The possibility of importation of bacilli is to be borne in mind, and Israel advises that the urine be collected in quarter hour portions and an equal number of animals inoculated from each portion, if bacilli present are imported the morbidity diminishes with each new group of animals. But occasionally even with strong presumptive evidence of renal tuberculosis the animal inoculation is negative, communication with the renal pelvis not having been es-

tablished. In case ureteral catheterization is not possible, there are several procedures that have been suggested, but owing to danger of permanent tuberculous fistula, opening of the bladder is not to be advised, inspection of the kidney is of little value, and incision may miss the diseased area; besides in view of the proposed removal, the other kidney is not free from danger. Israel advises that the ureter on that side be exposed, a small incision made in it, and through this the catheter passed in to the pelvis of the kidney, and after collecting the urine, the opening closed.

Israel does not believe that either spontaneous or medical healing of tuberculosis of the kidney ever occurs, and that pending the discovery of a specific treatment of tuberculosis every tuberculous kidney should be removed. Early operation protects the bladder from infection, and, if infected may cure, at least benefit the bladder condition, diminishes the mortality from operation, protects against miliary tuberculosis, secondary local infection, perinephritis, etc.

W. J. B.

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#### CONCERNING OPSONIC WORK.

Along with the great strides in vaccine therapy, controlled by the opsonic index, there is coming to be recognized a "limit of error" which is certain to be reckoned with, and it seems not improbable that a new technic for estimating the opsonic content may be demanded.

Jeans and Sellards (*Johns Hopkins' Bull.*, June and July, 1907) report the result of their experience of six months' daily work with tuberculo-opsonins, and, while they think it therapeutically efficacious, they have this to say as to the present method of estimating the opsonic content: "As the variation of the count in the individual leucocytes ordinarily varies

markedly (even with the low indices) the average count in fifty leucocytes is subject to considerable variation. In many preparations the leucocytes collecting along the edge of the smear containing distinctly more bacteria than those toward the center of the smear. Thus, by dividing a slide into three sections by transverse lines we found that the section at the end of the smear contained 282 bacteria, the middle section 107, and the first section 140 bacteria in 50 leucocytes.

"We have said enough to show that the limits of error, in our technic at least, and we have followed the method of Wright as closely as possible, are so great as to render the method inapplicable."

Simons (*Jour. of the Amer. Med. Assn.*, Jan. 12, 1907) has called attention to this inaccuracy and proposes that the percentage of phagocytizing leucocytes to the whole number counted, is more reliable than the average number of bacteria taken up by each leucocyte, also that it is simpler and more practical.

Trudeau, (*Amer. Jour. Med. Sciences*, June, 1907) very evidently questions seriously whether, with present technic, the opsonic index is a better guide to dosage, results, etc., than clinical signs and symptoms.

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*Gonorrheal Arthritis:* Cole and Meakins (*Johns Hopkins' Bull.*, June and July, 1907) give a resume of twenty cases of gonorrheal arthritis treated by vaccines, controlled by the opsonic index, which tends to show that great good may be expected from it, the cases on the average being of much shorter duration, pain and swelling being largely relieved within a few days and no ankyloses resulting. They too, believe that the present opsonic technic is of very little value, but from clinical experience that they can give 500-1000 millions every 7-10 days.



*General Paralysis of the Insane:* Jno. D. O'Brien (*Jour. A. M. A.*, June 29, 1907) is convinced that the "bacillus paralyticus" is the cause of this disease, and has corroborated it by inoculation experiments and agglutination tests with the blood of general paralytics.

He has treated seven cases with a vaccine made from this bacillus, and the results seem too good to be true. The change in most all the patients were remarkable, but had not been followed sufficiently long to exclude positively, the usual remissions.

*Diabetes Mellitus:* Jno. C. Da Costa, Jr. (*Amer. Jour. Med. Sciences*, July, 1907) found patients suffering from this disease to have a very low opsonic index to staphylococcus pyogenes aureus, and thinks this the reason why they are so susceptible to boils and other infections. Favorable reports are constantly coming in regarding the treatment of furunculosis, acne, abscesses, etc. O. M. G.

#### A STUDY OF 500 CASES OF PLEURISY.

Fraley (*Amer. Jour. of the Med. Sciences*, May, 1907) gives quite a detailed report of 500 cases of pleurisy admitted to the Pennsylvania Hospital from the years 1896 to 1905, and arrives at the following conclusions:

1. Pleurisy occurs at all ages, but most frequently from twenty to thirty.
2. Pleurisy is most frequent in the spring and least in the fall.
3. Pleurisy effects children under fifteen with equal frequency for boys and girls, but is four times as frequent in men as in women.
4. The colored race is particularly susceptible.
5. Occupation seems to have a decided predisposing effect.
6. Croupous pneumonia is the most frequent cause of empyema, and bronchi-

tis, or simple exposure to dampness and cold, seems to be more frequently the exciting cause of pleurisy than tuberculosis or rheumatism (as far as evidence is found).

7. Complications are frequent in hospital practice.

8. Aspiration shortens appreciably the course of the disease, and usually requires to be performed but once to effect a cure.

9. Examination of the blood is but moderately helpful and of doubtful value, as are also cytodiagnosis and inoscopy.

10. Empyema is always dangerous, and its natural course almost invariably fatal. Resection and free drainage is the proper treatment. O. M. G.

#### NERVOUS AND MENTAL DISEASES.

EDITED BY

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#### SOFTENING OF THE GENU CORPORIS CALLOSI.

A. Giannelli (*Journal of Mental Pathology*, Vol. 8, No. 2) summarizes his carefully studied case as follows: A woman, 55 years of age. Remote history not obtainable. Marked *risus spasticus*. Two years after the onset of this trouble she suddenly fell in an apoplectiform fit. This was followed by aphasia and tetra paralysis (left hemiplegia, paralysis of the lower right and paresis of the upper right extremity). The autopsy showed the existence of an old lesion in the uppermost part of the right putamen and anterior limb of the internal capsule, and a recent lesion, white softening of the *genu corporis callosi*. The author correlates the *risus spasticus* with the old lesion, and the motor disturbances following the apoplectiform attack with the softening of the corpus callosum knee. The author further concludes, from the analysis of symptoms noted in two cases of partial softening of the corpus cal-

losum, and of the literature in cases of tumors of this body, that,

1. Double hemiparesis either of equal intensity or more marked on one side, with spasmodic tendencies, or hemiparesis with symptoms of motor irritability on the other side (partial muscular contraction, choreiform movements, etc.), with unimpaired functions of the cranial nerves, point with sufficient exactness toward a lesion in the corpus callosum.

2. Absence of anesthesia of the paretic or paralyzed parts and defect of psychic synthesis upon artificially produced painful sensation (i. e., to become agitated or to cry out upon being pricked, on the paralyzed side, yet never carrying the hand on the healthy side to the point touched, which is done when pricked on the healthy side), also point to a lesion in the corpus callosum and may indicate that there is a lesion of the anterior part of this body.

#### GYNECOLOGY AND ABDOMINAL SURGERY.

EDITED BY

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#### ECTOPIC GESTATION.

Dr. Hunter Robb (*American Journal of Obstetrics*, July, 1907,) presents a very exhaustive article on "Ectopic Gestation, With Special Reference to the Treatment of Tubal Rupture." He passes over the obsolete methods of treatment with but a few words.

"Two plans of treatment present themselves, namely, the expectant and the operative, the methods varying according to the stage that pregnancy has reached."

He gives Schauta's statistics from the literature up to 1901: "That of 123 cases operated upon, 121 cases treated without operation presented a mortality

of 5.7 per cent, and 86.9 per cent, respectively." He fully coincides with the view that immediate operation is called for in one class of cases, namely, the early cases in which a positive or highly probable diagnosis of ectopic gestation can be made before rupture or if severe hemorrhage has occurred. The object in presenting this paper, he claims, is to consider the treatment of another class of cases regarding which there is still quite a diversity of opinion, referring to those patients whom he finds in a state of collapse following the rupture of an ectopic gestation, and proceeds to quote the position taken by some of the authors in their writings, which, however, is not clearly defined, thus quoting from Kelley's Gynecology: "Patients have been successfully operated upon in profound collapse, but I would rather wait a few hours, in some cases, if there are any encouraging signs of improvement, to gain the maximum effect from stimulation and then to operate."

Following the above he quotes at length from American and German writers, to bolster up his opinion of temporizing in these cases of severe shock following rupture. He says: "Cases in which loss of blood *per se* would be sufficient to bring about a fatal termination would seldom be seen in time to save the patient, and it is my firm conviction that in such cases only very rarely (and possibly never) is a patient saved by operation." He asks: "How, then, shall we explain, to what shall we attribute the fatal ending of so many of the serious cases of rupture of the ectopic gestation? and what shall be our treatment?"

"In view of these cases we feel that due consideration must be accredited to other factors than hemorrhage, potent as it may be that jeopardize the lives of the patients."

In the discussion which followed the reading of this paper before the American Gynecological Society, Dr. Baldy, of Philadelphia, stated: "The teaching of the essayist is so dangerous that he could not refrain from saying a few words. The essayist had remarked that these patients did not bleed to death. Dr. Baldy stated that plenty of them bled to death, and in support of this statement mentioned the report of Formad (coroner of Philadelphia at one time) who put on record some fifteen to twenty cases of patients with ruptured ectopic gestation that bled to death. The abdomen having been found filled with blood. He favored early operation in cases of ectopic gestation."

Dr. Frederick, of Buffalo, has seen "from seventy-five to 100 of extra-uterine pregnancy, of this number five had died from acute hemorrhage. Three he had opened the abdomen and endeavored to save the patients' lives, but every one of the five were almost pulseless at the time of the operation. He believed that the cause of death from these rapidly acute cases was largely due to the loss of blood and was not a matter of shock. He did not see why these cases should have more shock than those who did not die of shock."

Dr. Harrison, of Patterson, N. J., stated: "Some cases of ruptured ectopic gestation operated upon late, die, which he believed could have been saved by early operation."

Dr. Stone, of Washington, thought "we were taking a step backward to advocate delay in cases of ruptured ectopic pregnancy, that when a patient was bleeding it was a good principle to operate with a view of arresting the hemorrhage. He favored early operation."

# OPHTHALMOLOGY.

EDITED BY  
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## THE PRESENT POSITION OF THE SPIROCHAETA PALLIDA IN RELATION TO SYPHILITIC AFFECTIONS OF THE EYE.

Sydney Stephenson (*Ophthalmoscope*, June, 1907,): Since the appearance of Schaudinn and Hoffman's article, in April 10, 1905, announcing the discovery of a tiny corkscrew-like organism, the *spirochaeta pallida*, in syphilis, upwards of seven hundred communications have been published on the subject.

The organism in question, now called the *treponema pallidum* (Vuillemin) has been found in all stages and forms of syphilis, whether acquired or inherited, human or animal. It has also been demonstrated in the blood of patients affected with hereditary syphilis and of those passing through the secondary stage of the acquired disorder. On the other hand the *treponema* has not yet been found in non-specific lesions.

The *treponema* has not yet been cultivated outside of the animal body, and to that extent its specificity may be called into question, but this gap in the evidence does not invalidate the general conclusion that the *treponema pallidum* is almost certainly the cause of syphilis.

In no condition, perhaps, has the *treponema* been found in such numbers and with such constancy as in the bodies of fœtuses or of babies who have succumbed to the syphilitic virus. It has been discovered not only in the actual specific lesions themselves, but also in the tissues, viscera and blood. It has been found in the non-inflamed eyes of fœtuses and infants suffering from congenital syphilis.

The eyes of both monkeys and rabbits have been successfully inoculated with syphilitic material from man and the resulting lesions of the cornea and iris are



like those seen in man from ocular syphilis.

This discovery of Schaudinn's organism in actual syphilitic invasion of the human eye has seldom been reported, probably because it has not yet been often searched for. It has been demonstrated in irido-cyclitis and keratomalacia.

The recognition of the fact that the treponema occurs in specific lesions of the eye has suggested the explanation of certain points that were more or less shrouded in mystery. Thus the existence of the organism in the cornea, iris, and choroid of syphilitic infants gives us a hint as to the mechanism whereby interstitial keratitis, iritis, and choroiditis may be brought about later in life. Although most of the protozoons may succumb to the natural defensive powers of the body, yet some may remain latent, perhaps in a resting stage, until roused into renewed life and activity by an exciting cause, possibly years after the original invasion. On this theory it becomes comparatively easy to understand why in predisposed subjects local injury is so common an exciting cause of interstitial keratitis and why a history of traumatism is far from unknown in choroiditis in those who have acquired or inherited syphilis.

#### TREATMENT OF TRACHOMA.

James Bordley (*Ophthalmic Record*, July, 1907,) believes the most satisfactory way of treating trachoma is by rubbing boracic acid powder into the conjunctiva, as first advised by Priestly Smith.

A 4 per cent solution of cocaine is instilled into the conjunctival sac every five minutes for twenty or thirty minutes. The upper lid is then everted and with a cotton covered stick, the boric acid powder is rubbed into the conjunctiva until

it bleeds rather freely, taking care to rub the tissue of the cul-de-sac with as great vigor as that of the tissues. The conjunctiva of the lower lids is treated in the same manner.

The lids are rubbed every day for two weeks, then every other day for ten days, and then as is found necessary to keep the process of cure from coming to a standstill. The longest time Bordley has found it necessary to continue the friction was ten weeks.

### Constituent Societies

July 11, 1907.

The **Boulder County Medical Society** met in regular session, in the Physicians' Block, Thursday, July 11, at 8 p. m.

In the absence of the president and vice president, the meeting was called to order by Dr. Jolley.

Members present: Drs. Sheveley, Garwood, Gillespie, Jolley, Gilbert, Campbell, Rodes and Wood. Visitor present: Dr. Evans.

The minutes of the last meeting were read and approved.

The speaker for the evening, Dr. Wolfer, being absent, the evening was devoted to a discussion of clinical cases and the regular business of the society.

Dr. Gillespie reported a case of **small-pox** in a woman in the eighth month of pregnancy. The diagnosis was in some doubt prior to the eruption, owing to the severe labor pains which appeared after the second day. There was no dilatation and the pains subsided. Labor came on two weeks later, and the child presented no evidence of eruption except a few indefinite macules, disappearing in one day.

Up to the time of his report the child had shown no evidence of the disease.

Dr. Garwood reported a case of **eclampsia** in a woman III-para, aged 35. Had had no previous trouble. An urinalysis made three days previous to attack was negative, except in high specific gravity. Within three days neuralgic pains in side and shoulders and headache appeared, with some edema of face and hands. Urinalysis then disclosed albumen, casts, blood, and cylindroids. The first convulsion occurred that night, and three oc-

curred within three or four hours. The child was delivered by modified version and was dead. Recovery was prompt.

Dr. Gilbert reported a case of possible **acute ptomaine poisoning**, with fatal termination in less than eight hours from first appearance of symptoms.

Also, a case seen in consultation, of a young woman, of 18 years, of a highly nervous temperament who became excited over delay in an expected visit from an admirer. Complained of abdominal pain and some nausea on retiring—was nauseated at 1 a. m., and physician was called at 5 a. m. She was restless and much excited, pulse 130, temperature 103 degrees. A diagnosis of **hysteria** was made, and the danger of exhaustion if not controlled, pointed out. Death occurred in twenty hours, with no new symptoms.

Dr. Jolley reported a case of a young girl of 13 years, whose head struck that of another girl and something was felt to snap in the neck. She had severe pain in head, which improved for a few days, then became worse, with severe pain at base of brain. Five hours later strabismus appeared—Kernig's sign, the tache-cerebrale, and Babinski's sign were all present. There was no evidence of any dislocation. The temperature once reached 104 degrees, but was usually much lower, varying from  $\frac{1}{2}$  to 1 degree, morning and evening. In the latter part of her sickness the temperature was 101 degrees in the morning and normal in the evening. Recovery took place in about three weeks.

The applications of Dr. Robert L. Henderson, of Louisville, and Dr. C. W. Bixler, of Erie, were presented for membership, and referred to the Board of Censors.

The reports of the secretary and treasurer were read and referred to the auditing committee.

The society then adjourned to meet August 1, in the Physicians' Block.

LUCY M. WOOD, Secretary.

August 1, 1907.

The **Boulder County Medical Society** met in regular session in the Physicians' Block, Thursday, August 1, 1907, at 8 p. m.

The vice president, Dr. Spencer, presided.

Members present: Drs. Queal, Spencer, Jolley, Cattermole, Garwood, Baird, Reed, Campbell, Porter, Gilbert, Giffin and Wood.

The minutes of the last meeting were read and approved.

The speaker for the evening, Dr. Garwood, gave the history of an **epidemic of typhoid fever** seen in the last half of 1906 in the vi-

cinity of Marshall. A diagram of the town and surrounding country, showing the location of the various settlements and their relation to South Boulder Creek and the various ditches, etc., aided greatly in an understanding of the conditions prevailing as to water supply, drainage, etc.

There were thirty-five cases in the series, the majority occurring in August, September and October, of 1906.

In tracing the possible source of infection, Dr. Garwood made out a very strong case against the water supply as the probable agent. It is evident that the water supply of the town of Marshall has abundant opportunity for infection from the drainage of Eldorado Springs and Crag's Resort, both much frequented in the past summer.

The shallower wells supplying the water used probably receive a part of their supply from seepage from the large ditches near them. In the western section of the town, both wells and houses are removed a considerable distance from the ditch, and no cases developed there. In the two sections less favorably located, a number of cases occurred. No cases occurred at Marshall Lake, where creek water obtained above Eldorado Springs was used. At the Mitchell mine, artesian water is used, and no cases developed.

As cases developed wherever the probability of contamination seemed great, and failed to develop wherever no contamination seemed probable, Dr. Garwood believed that the water supply should be held responsible.

In the epidemic under discussion few complications and but few relapses occurred.

In treatment, few drugs were used. Absolute rest, liquid diet, a large amount of water by mouth, and cold sponges whenever the temperature reached  $102\frac{1}{2}$  degrees, with careful nursing, made up the routine treatment.

Two cases, both recent arrivals from France, passed **ascaris lumbricoids** at two separate intervals during attack, but have experienced no further trouble.

There were two fatalities, one under Dr. Garwood's care, and one case infected in Marshall, died in the County Hospital in Denver.

Dr. Garwood's paper was heard with great interest, and brought out an interesting discussion from the members present.

The status of typhoid fever in Boulder was discussed, and the city health officers requested a few more details in the reports of cases. The source of the milk supply, as well as of vegetables, etc., would be an aid in tracing the source of infection.

Dr. Gilbert reported a case seen recently, a man of 26 years, coal miner, was formerly very energetic, but much less so in the past two or three months; has complained of legs being tired. A short time ago was treated for lumbago, and found it necessary to use two canes.

Recently, on arising in the night, he fell and was unable to arise, both legs being paralyzed. Examination showed slight scanning speech, pain over lower abdomen and region of gall bladder. There is hyperesthesia of trunk at the level of the eighth and ninth intercostal nerves, which seems to be ascending; anesthesia exists below this girdle. Thermic sense is lost but muscle sense is present. Reflexes below the zone of hyperesthesia are lost and both bladder and rectum are paralyzed. The temperature was 103 degrees when first seen, but has been 100 to 101½ degrees since. A myelitis, either transverse or central, is probably present.

Dr. Robert L. Henderson, of Louisville, and Dr. C. W. Bixler, of Erie, were elected to membership in the society.

The society adjourned to meet Thursday, September 5, in the Physicians' Block.

LUCY M. WOOD, Secretary.

Trinidad, Colo., July 5, 1907.

The regular meeting of the **Las Animas County Medical Society** was held at the office of Dr. Robinson, with President James G. Espey in the chair. The minutes of the previous meeting were read and approved. Dr. Forhan, the essayist of the evening, being absent, the society devoted its time to the report and discussion of clinical cases. Dr. J. T. Dowling reported a most interesting and instructive case of **ruptured tubal pregnancy** followed by laparotomy and report of favorable outcome. Dr. Davenport reported a case of **iritis and parotiditis** occurring simultaneously. Dr. George Dowling reported several cases of **systemic blastomycosis** seen by him while in Chicago; also gave careful attention to its diagnosis and etiology. Dr. Robinson reported a case of **appendicitis** with peculiar urinary findings, also a case of **abscess of liver**.

The following members were present: Drs. J. T. Dowling, Davenport, Dayton, Robinson, James Espey, and Freudenthal; and visitor, Dr. George Dowling. The office of Dr. Freudenthal was chosen for the next meeting, with Dr. J. F. Dowling to present the paper.

ALFRED FREUDENTHAL, Secretary.

Trinidad, Colo., August 5, 1907.

The regular meeting of the **Las Animas County Medical Society** was held at the office

of Dr. Freudenthal, with the following members present: Drs. Forhan, Thompson, Dowling, Fox, Hinman and Freudenthal, and visitor, Dr. Abrahams. In the absence of the regular president, Dr. Forhan presided. No clinical cases of interest were reported. The essayist, Dr. J. T. Dowling, presented a most interesting paper, entitled, "**The Contagious Diseases and the Quarantine of Them**," in which he treated not only of their quarantine, but also of their etiology and diagnosis, and completed his paper by taking up a comparison of the various methods of fumigation and the laws of quarantine. The paper was freely discussed by all present. Dr. D. G. Thompson brought up the subject of the difficulty sometimes encountered in the differential diagnosis of **scarlatina** when occurring in the negro.

The office of Dr. Forhan was selected for the next regular meeting, he also to present the paper.

There being no further business, the society adjourned.

ALFRED FREUDENTHAL,

Secretary.

The **Clear Creek Medical Association** met May 7, in Central City, at the office of Dr. A. C. Asquith. The following members were present: George Atcheson, C. A. Aberg, G. C. Saunders, J. A. Richmond, C. M. Froid, E. R. Fouts, John Atceson.

The minutes of the last meeting were read and approved:

Dr. R. W. Fraser, of Central City, was elected to membership.

Charges were preferred against one of the members from Idaho Springs for doing contract practice, contrary to and in violation of rules governing such practice. The case was referred to the censors for further investigation and to report at next meeting.

On motion the association adjourned. All the members were invited to take luncheon with Dr. Asquith.

A. ABERG,

Secretary-Treasurer.

## New Members

R. F. Coffman, Clara M. Gouley, S. Fosdick Jones, Charles C. Fowler, R. G. Walker, A. C. Godfrey, Denver; George P. Kruk, Eldora.

## Items

It is with regret that we learn of the death of Leland Bull, the ten-year-old son of Dr. H. R. Bull, of Grand Junction, Colo., president of the Colorado State Medical Society. The cause of the death was, indirectly, appendicitis, and the end occurred when recovery seemed most probable, eighteen days after the operation,



and as a result of post operative ileus. We feel sure that Dr. Bull has the sympathies of the entire society in his loss.

Dr. W. P. Harlow, of Boulder, has been appointed Dean of the Medical Faculty of the University of Colorado, vice Dr. L. M. Giffin, resigned.

"Abdominal Diagnosis as Tested by Operation," was the subject of the address of Dr. J. N. Hall, of Denver, at the meeting of the Oregon State Medical Society, July 12, 1907.

A. G. Clarke, a prominent Denver druggist and proprietor of the Albany Pharmacy died as a result of the automobile accident while riding with Dr. A. C. Hurdman, of Denver. The machine collided with a heavy express wagon on the evening of July 13, and Mr. Clarke died the following day from internal hemorrhage.

The monthly report of the **Colorado State Board of Health** for June, 1907, shows the total number of deaths to have been 851. Those from diphtheria, 6; from typhoid fever, 11; and from scarlet fever, 26. The board announces that it is not yet prepared to collect birth and death reports in accordance with the new vital statistics act.

### Books Reviewed

**Psychology Applied to Medicine.** Introductory Studies by David W. Wells, M. D., Lecturer on Mental Physiology and Assistant in Ophthalmology, Boston University Medical School; Ophthalmic Surgeon, Massachusetts Homeopathic Hospital, Boston; Oculist, Newton (Mass.) Hospital. 12 mo. Cloth, pp. 141. Illustrated. Price, \$1.50 Net. Philadelphia: F. A. Davis Company. 1907.

Because, in the author's opinion, medical education in the past has undoubtedly tended to an ultra-materialistic conception of biology, its physiological aspect has improperly been postponed usually to a post-practical period—has been regarded as a proper study for the veteran after his years of practical experience. To correct, so far as he can, this improper conception of the possibilities of suggestive healing by regular practitioners, the author presents his essay to open up this subject to the undergraduate, at least in an elementary manner, the psychology of hypnotism and the psycho-therapeutics is presented in an interesting way and comprehends historical development as well as principal and practice which have survived in the former. The book is in many ways helpful.

B. O.

**Second Report of the Wellcome Research Laboratories,** At the Gordon Memorial College, Khartoum. Andrew Balfour, M. D., B. Sc., F. R. C. P., Edin., D. P. H., Camb., Director, Fellow of the Royal Institute of Public Health, Member of the Epidemiological Society, etc. Cloth, 255 pages. Department of Education, Sudan Government, Khartoum, 1906.

Many of us are accustomed to regard Africa as a place of deserts and jungles and are unlikely to associate it, particularly the inland regions, with advances in science, above all sanitary science. To such these reports will come as a surprise. The little group of workers in the Wellcome Research Laboratories at Khartoum in the heart of the Sudan is doing work that will compare with that done anywhere, under difficulties—lack of adequate equipment, unfavorable climatic conditions, etc.—which would discourage almost anyone. These laboratories were established in 1903, for the purpose of promoting the study of tropical diseases, various sanitary matters and the economic resources of the country.

The more important features of the present reports are: Studies of mosquitoes and other biting and noxious insects, with descriptions and illustrations of new species; careful descriptions and fine colored plates of various parasites found in the blood of fishes, birds and mammals; detailed reports of rather extended experiments with trypanosomiasis in animals; and reports of a large number of chemical analyses mostly of economic interest, including minerals, soils, Nile water, grains, gums and other vegetable products.

The portion of greatest interest medically is that dealing with trypanosomiasis, to which sixty pages are devoted. Much of this portion has already appeared in various British journals. Extensive inoculation experiments upon dogs, rabbits, rats, goats and monkeys are detailed at length; and one case of human trypanosomiasis is carefully described. The therapeutic effects of chrysoidine and of blood serum from wild animals (big game) inhabiting trypanosome-infected districts, were studied, but nothing definite was ascertained. Chrysoidine proved entirely valueless in animals, but gave some slight promise in human trypanosomiasis. The serum treatment appears to produce a profound effect upon the trypanosome of mules, and it seems probable that the most satisfactory results in treatment will be reached along this line.

J. C. TODD.



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# COLORADO MEDICINE

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All communications to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are typewritten.

Communications and items of interest are invited from all parts of the state. Death notices, removals, changes of address, etc., are especially desired.

Secretaries of the County Societies are earnestly requested to report their meetings, including the subject matter of the papers presented, and in general, the substance of the discussions.

Marked copies of local newspapers, or clippings, containing matters of interest to the profession will be gratefully acknowledged. The name of the sender should be given.

The journal will be issued on the 15th of each month. All copy must reach the editor not later than the first of the month. Advertisements of proprietary medicines will be accepted provided the preparations advertised have been approved by the Council of Pharmacy and Chemistry of the American Medical Association. Address all communications regarding advertising to

JAMES M. BLAINE, M. D., *Adv. Mgr.*, 3-4 Steele Block, Denver, Colo.

## IMPORTANT NOTICE.

All members of the Colorado State Medical Society are entitled to a copy of this journal each month. Failure to receive the same, and change of address, should be promptly communicated to the editor.

VOL. IV.

DENVER, SEPTEMBER, 1907.

No. 9.

## Editorial Comment

### THE NATIONAL FORMULARY.\*

The National Formulary might be said to occupy a similar relation to the American Pharmaceutical Association as does the United States Pharmacopeia to the Revision Committee; it consists of the best combinations of medicines which have been determined by a like committee from this national pharmaceutic body in accordance with the demands of the medical profession, and which are not included in the Pharmacopeia.

It is not the purpose here to discuss polypharmacy since it is often to be found that advocates of a single drug therapy

are the heaviest users of proprietaries, the ingredients of which might sometimes be counted in tens rather than in units.

It is often stated in defense of the use of proprietary preparations that credit should be shown the originator by employing them. To this it can be replied that most of the popular mixtures grew out of the extemporaneous prescription of some physician, who discovered that it was good, and told his associates about it. Repeated refilling opened the eyes of the druggist or patient, and some "anti" or "cura" prefix or suffix was incorporated in a trade name.

By reason of these facts the National Formulary was devised by the A. P. A. after modifying the preparations in order to render them more elegant, pharmaceutically.

When the preparation of medicines ordered or specified "N. F." or "U. S. P." are not up to the standard, we have recourse against the druggist, and action against an incompetent is as justifiable as

\*An abstract of remarks made before the Medical Society of the City and County of Denver, and is published in compliance with a resolution of that body. The list of preparations which follows were exhibited and attention was called to their similarity to proprietary articles, the names of which cannot be included in this article.]



when directed against a quack in our ranks.

What recourse have you when you order Smith, Jones & Co.'s Elixir? None whatever. With the official and officinal formularies, the process of preparation is so clearly stated, that in case of error the dispenser is just as liable for it as though it had caused physical damage. These are facts which our profession would do well to study; familiarizing ourselves with the preparations, their appearance, taste, smell, etc., in order that when not properly prepared we will be in a position to make an example of some of the inefficient pharmacists who invade the ranks of our sister profession. We will aid them in weeding out the pretenders and by so doing increase the reliability of the medicines we order. Let us consider whether it would not be a firmer step in the line of stamping out the patent medicine business, counter prescribing and other evils with which we charge the druggist than by assailing him for attempting to gain his livelihood by the sale of nostrums, which is forced upon him by our lack of support. Show the druggist of your community that you have an interest in the scientific compounding of medicines by using and familiarizing yourselves with the best the pharmaceutical profession has to offer, rather than degrade yourselves in his eyes by the continual use of proprietaries. It is a fact to be kept in mind that a graduate of a recognized school of pharmacy is in a position to estimate the efficiency of a physician's training in materia medica and therapeutics if he cannot find an equivalent for 99 per cent of the proprietary mixtures used by the physicians of today, and many of which can be written for extemporaneously; it may require more time, as is often the complaint, but, better so than to devote more time to re-

viling the druggist, and discussing the subject in its end phases.

The manual recently issued by the A. M. A., and reviewed elsewhere in this issue, should be in the hands of every physician who has an interest in the cleansing himself of the practice of prescribing proprietary medicine.

Lack of space prevents the mention of the counterparts of many commonly ordered proprietaries, but a little time spent in the study of the manual will disclose most of them. Educate yourself to a higher prescribing ability rather than place yourself in the position of a student of the detailman—he often overestimates his wares.

The following classified list includes many for which there are trade counterparts:

*Reconstructives:* Elixir Glycero-phosphatum; Elixir Ferri, Quininae et Strychninae Phosphatum; Syrupus Phosphatum Compositum; Emulum Phosphaticum; Emulum Petroli; Syrupus Hypophosphitum U. S. P.

*Hematinics:* Liquor Ferri Albuminati; Liquor Ferri Peptonati cum Mangano.

*Antiseptics* Liquor Antisepticus; Liquor Antisepticus Alkalinus; Pulvis Antisepticus.

*Uterine Tonics:* Tinctura Viburni Opuli Composita; Elixir Velburni Opuli Composita.

*Digestants:* Elixir Pepsini; Elixir Pepsini et Bismuthi; Elixir Pepsini Bismuthi et Strychnina; Essentia Pepsini; Elixir Digestivum Compositum; Pulvis Pepsini Composita; Pulvis Pancreatinae Composita; Pulvis Pro Lactae Humanisato.

*Unguents:* (Antipruritic) Unguentum Picis Composita; Unguentum Resorcini Composita.

*Somnifacients and Sedatives:* Syrupus Papaveris; Elixir Paraldehydi; Elixir Chlorali et Potassi Bromidi Composita.

*Tonics:* Elixir Gentianae Glycerinatum.

*Cough Sedatives and Expectorants:*

Elixir Terpini Hydratis; Elixir Terpini Hydratis Cum Codeina; Elixir Terpini Hydratis Cum Heroína; Elixir Picis Compositum; Syrupus Sennae Aromaticum Compositum; Syrupus Pectoralis.

*Cathartics and Aparentics:* Elixir

Rhamni Purshianae Compositum; Liquor Sodii Phosphas Compositum; Magnesii Oxidi Ponderosum; Elixir Catharticum Compositum; Syrupus Sennae Aromaticum.

### INHUMANITY IN HOSPITALS.

Under the word "hospital" there appears, in the Standard dictionary, the following: "An institution for the reception, care and medical treatment of the sick or wounded. Formerly the word indicated a place of hospitality for those who were in need of shelter and maintenance."

The word conveys an impression of a place where the sick and afflicted are cared for and attended; there is something about its sound that includes sympathy.\* But lo! it would seem that the old order has changed, at least in Denver. Some hospitals are evolving into business and commercial institutions, assuming all the inhumanity and harshness which goes with modern commercialism, under the cloak of charity and perfumed with religion.

The greatest source of revenue is from the surgical side, hence the favoritism is to be found here. Anything which interferes with the welfare and comfort of the surgical cases is a menace to the place and must be excluded. Medical cases are seemingly tolerated, presumably for outward appearances.

Pneumonia may be pneumonia; typhoid fever, typhoid; uremia, uremia; and so on, until they become delirious, then they are

alcoholic insane lunatics—and it makes no difference whether or not they have ever indulged in drink—intolerable and dangerous to the hospital and its inmates. Pretty state of affairs, isn't it? Nevertheless, this is just what occurred in one of the largest hospitals, and has attracted our attention. The following are the facts:

A man was admitted while conveying from an attack of acute articular rheumatism. A delirium supervened a short while later, which became somewhat noisy. The urine indicated the probable cause by its albumen and cast contents. He was forthwith consigned to the basement, a rubbish or storeroom, with unplastered, bare stone walls; he was tied in bed and attended by a male guard. Meanwhile the attending physician was *ordered* to remove him from the place without delay. The superintendent and head nurse had concluded the case to be one of delirium tremens—though neither could claim a knowledge of medicine—and the hospital would not keep him. The insane ward of the County Hospital was threatened, and would be resorted to as soon as the necessary permit could be obtained.

That such a condition of affairs is allowed is a disgrace to the profession, and particularly to the attending staff, who serve the institution.

It seems unfortunate that hospitals could not be superintended by competent physicians rather than by self-assuming laymen, whose ignorance soon breeds that egotism and *ultra*-superior medical judgment which brands them what they really are, and which must eventually lead to the sacrifice of life.

It will soon behoove one to first ascertain the rulings and their inflexibility, before sending patients to some of the Denver hospitals, if basement-coolers, un-

warranted restraint and abuse, male guards or the insane sanatoria are to be avoided, when patients are suffering with diseases in which the delirium is a possible complication or sequel.

### WESTMINSTER UNIVERSITY COLLEGE OF MEDICINE.

During the past summer the funeral bell has been tolled over the mortal remains of the *Denver Homeopathic Medical College*. According to the *Critique*, the child had been poorly nourished for some time, and finally expired from inanition. The light from the funeral pyre had scarcely ceased to glow, when, "*mirabili dictu*," there arose from the ashes the promising *Westminster University Medical College*.

We use the word *promising* in its fullest sense, because many promises were made, that subsequent events have shown, cannot and will not be fulfilled. The prospectus set forth that the exigencies of the age demanded the teaching of the broadest kind of medicine, and that the new college was to be the drum major in the vanguard of progress. Others, seeing the great and brilliant star in the West, would immediately get aboard the bandwagon and teach as they were going to teach, "Homeopathy, Eclecticism, and Regular Medicine."

Great scheme—the future disciples of Esculapius (and Hahnemann) might continue to cure specific infection by the use of "sensible" and continued doses of mercury as they could just as effectively cure it by using a "200th centesimal potency of pus from a syphilitic chancre."

Some of the brightest dreams are followed by the rudest awakenings, and the advent of the catalogue from the above college has shattered this bright vision and produced many a heart failure.

Instead of making provision for the teaching of Regular Medicine, they sim-

ply appended the names of a few young men from the Regular school, to the old faculty of the Homeopathic College. These young men were assigned to positions of minor importance, with the exception of two, and it will be seen by reference to our correspondence columns that the use of these two names was unauthorized.

If the promoters of this reincarnation imagine that by placing a few young men in minor positions, they are teaching REGULAR MEDICINE, they have another guess coming. We have no quarrel with Homeopathy or with a Homeopathic college, but we have a quarrel with any institution that *pretends* to represent the Regular school and does not have *even one man* on its catalogue to teach MEDICINE. We need not discuss incompatibility. A paranoiac with delusions of grandeur would never imagine that Homeopathy and Regular Medicine could be successfully taught to the same student at the same time. Will the *new* dean of the *old college* explain why they have lost some of the best Homeopaths from their college and why they are trying to get in out of the wet by *pretending* to teach Regular Medicine? Will he also explain why they took the name "*Homeopathic*" from a hospital all their own? Stick to your own ship and avoid criticism.

We are surprised that President Weaver of the new university should allow his new ship to become clogged with barnacles before he had weighed anchor for his initial trip. If he teaches theology as his first born will teach mixed therapeutics, we will gather flowers for the obsequies.

The disciples of John Calvin have always been noted for taking things straight, but we fear this cocktail medical school will be as offensive to the palate and nostrils of the Rev. Coyle (vice pres.)



as were the morals of Denver when he asked for missionaries to convert the city.

In the *Rocky Mountain News* of September 1, Editor Patterson attempted to get the laugh on Chancellor Buchtel by assuming that the Westminster Medical College would be a rival of the "Denver and Gross" of the Denver University. But no one connected with the latter school has lost any sleep over what the Homeopathic school may do, and no one will have anything to say so long as they represent themselves and not *misrepresent* others. J. M. BLAINE.

Note.—Since the above was put in form, we are notified, on good authority, that the trustees have canceled the arrangements with the Homeopathic College.

*Treatment of Diabetes.*—In summarizing the treatment of Diabetes Mellitus Parsons (*Practitioner*, July, 1907) states:

(1) There is no specific treatment for diabetes. (2) Drugs play, at best, only a subsidiary part in diabetic therapeutics. (3) Opium is the best antiglycosuric drug at present available. It may be administered in any stage of diabetes, but it is most useful in severe cases, in which a rigid diet fails to remove all sugar from the urine. Dose, 1-5 grains of the extract. (4) Sodium salicylate and aspirin are valuable in mild cases of diabetes and may temporarily completely remove glycosurin. Dose, 15 grains three times a day. (5) Jambul may be used as an alternative to sodium salicylate or aspirin. (6) A positive ferric chloride reaction indicates the daily administration of bicarbonate of soda in doses of 150 grains and upwards. (7) The intravenous injection of 35 ounces of a 3 to 4 per cent Solution of *Carbonate* of soda affords the best chance of restoring consciousness in a diabetic coma. (8) Constipation should be guarded against in all stages of diabetes.

## Original Articles

### DIETETICS: A GENERAL CONSIDERATION OF ITS DIAGNOSTIC AND THERAPEUTIC VALUE.—MONO-DIET.

By C. D. SPIVAK, M. D., Denver, Colo.

Dietetics is a branch of the medical sciences which treats of the principles underlying the rational feeding of the healthy and the sick. Though one of the oldest branches of the medical sciences, as is evidenced from the many wise and beneficial rules and maxims laid down by the lawgivers of antiquity, yet we can say that dietetics is still in its formative period.

Until the middle of the nineteenth century principles of dietetics did not exist at all, and since that time the principles which guided the feeding of healthy individuals have changed three times in the course of the last three score years. At first the calculation was very simple—so much bread, so much meat and so much of the other stuffs for a man doing a certain kind of labor. This calculation was based upon observation. It was good enough for all purposes. After further research it was found that the daily rations were based upon the quantity of proteid, carbohydrate and fat contained in the food, and that each must bear a certain relation to the body weight of that consumer. This sounded scientific enough, and was supposed to represent the last word of the science of dietetics. But this theory was not destined to live long. It is true the proteids carbohydrates and fats must still be taken as food, and in about the same quantities as before, but the present calculation is made according to the principle of the caloric value of food, and that no matter what

food one eats as long as a sufficient number of calories is taken, life will be sustained. So far, the last theory seems to be without a flaw.

Assuming that this theory is absolutely right for the feeding of the healthy, and that the Commissary Departments of the Army, Navy, Prisons and of other large aggregations of people can safely rely upon the caloric tables, we must, however, admit that when the physician makes out a diet list for a number of patients in special hospitals or wards, he will and must be guided by entirely different considerations. For the feeding of the healthy individual all that is necessary to know is the weight of the person and the caloric value of the articles of food. Of course the personal equation in diet is to be reckoned with, as in all matters physiologic; the size of the individual, his age, sex, habits, occupation, idiosyncrasies, etc., will each have a modifying influence upon the quantity and quality of the various articles of diet. But no matter how many and varied be the modifying influences, all healthy persons of the same size, age and weight will ingest, digest and absorb about the same quantity of food. The weight of the patient and the caloric value of food will be the primary guiding points, and the modifying influences only of secondary importance.

In considering the dietetics of the sick, on the contrary, the modifying influences become of paramount importance and the caloric value of food recedes to the background. Who would seriously consider it of the slightest practical importance to compute the caloric values of food in feeding cases of typhoid fever, gastric ulcer, vomiting of pregnancy, or anorexia nervosa? In all these cases it is evident that the guide for the diet will be the modifying influence—the condition of the stomach and bowels,

the appetite, the presence of vomiting diarrhea, constipation, flatulence, palpitation, fever, chills, etc. The equilibrium between the income and outgo is not expected by any sane man to be maintained through the course of the disease. No one has ever succeeded in carrying through a case of typhoid fever without finding a notable loss in the weight of the patient; and, on the contrary in a case of anorexia nervosa, provided the diagnosis is correct and the patient is placed in the proper environments, he will gain weight from day to day just as sure as the typhoid case will loose.

In reviewing the history of dietetics for the sick and comparing the theories held at different periods, one is amazed to find them diametrically opposed one to another. In the days gone by the tendency was to put patients on a very restricted diet, mostly liquid; especially all febrile cases were almost deprived of food. Then the pendulum swung the other way, and "feed fevers" became the motto. Take the dietetics of typhoid fever of our own day and generation and you will have noticed the shifting of ideas within the last two or three years. It's but yesterday that milk was considered the only article of food to be allowed to such patients. To have dared to prescribe a boiled egg or a piece of toast would be equal to inviting a malpractice suit. Nowadays, some do not hesitate to admit openly that patients are doing just as well on solid and semi-solid diet as on an exclusive milk regime, and others boldly proclaim that milk is absolutely unsuitable as a food in typhoid fever, nay, that it is harmful. The same change of front and unsettled condition is noted in the dietetic treatment of diabetes, hyperacidity, etc. As in the feeding of the healthy the theories have changed thrice, so have also the theories concerning the feeding of the sick assumed new

aspects. The difference is that the healthy man laughs at theories and no matter what the learned doctor thinks, whether it is the quantity of proteids or the number of calories the food contains that sustain life in him, all he cares for is to get enough of the stuff to satisfy his natural desire for food. The healthy man has not lost anything by the change of theories. He unconcernedly went on with his three meals a day. It is different with the sick. Here the physician is the sole judge and dictator as to the quality and quantity of food to be taken, and therefore any change in the views concerning the dietetics of the sick must have a profound influence upon the prognosis of the disease. A change of views therefore regarding the feeding of the sick makes a great deal of difference to the patients and must have a considerable influence upon mortality statistics. For if milk is found now to be harmful in typhoid fever, and it is logical to assume that the milk of the progenitors of the present cows was not better than the latter day product, therefore we have a right to conclude that many a patient died from hemorrhage or perforation as a consequence of a strictly milk diet.

The deplorable state of our knowledge of clinical dietetics, in spite of the many bulky volumes recently published, is due to the fact that the subject is studied from a wrong point of view, namely, that the food bears the same relation to the healthy as to the sick, that in both cases it merely supplies a physiologic want. As long as this view will prevail, our progress of clinical dietetics will be slow. The right view of the matter is that just as disease is defined as being an increase diminution, abolition or perversion of a normal physiologic function, so all physiologic factors, like light, air, food, etc., can be made to affect the organism in

such a way as to increase or diminish, abolish, or change certain physiologic functions. To make my statement clear, let us take atmospheric air as an example. To the healthy individual it is a physiologic factor of vital importance. To the consumptive, however, the rarefied air, of high altitude, in addition to its physiologic action, becomes also a therapeutic agent. It is the same as regards food. In the healthy it is a physiologic factor of vital importance; in disease it should be used qualitatively and quantitatively in such a way as to add to its physiologic value also a therapeutic influence.

Now in order to study the therapeutic value of food, the same methods should be adopted as in the study of drugs; namely, that one article of food should be administered at a time, and its effect upon the circulation, respiration, temperature, secretions and excretions, etc., be carefully noted. Some valuable observations have been made in reference to one or more points of the therapeutic importance of food as far as the stomach and intestines are concerned, but no systematic investigations have been carried on upon single articles of diet from a purely therapeutic standpoint. I will pass in review the therapeutic effect of certain articles of diet, some of which have been observed for countless generations and have become the common property of the people. A piece of herring, a pinch of salt, sardines, caviar, radish, mustard, catsup, ginger, pepper, pickles, salad and other articles salty or sour will whip up an appetite where nux and hydrochloric acid have made no impression. These are certainly good stomachics. Alcohol, spices, and carbonic acids will further motor activity of the stomach and will prevent fermentation. These articles help digestion and in many cases are better than pepsin and pancreatin. Rye bread, buckwheat bread, salads



and fruits are the best therapeutic means we can employ to promote peristalsis. There are a number of articles that have a tendency to check intestinal peristalsis like albumin, chocolate, cocoa, mutton, etc. Coffee, alcohol and various teas act as an anodyne in colics of gastro-intestinal and uterine origin. During an attack of chills, hot drinks, like coffee, tea, bouillon, drinks sweetened with sugar or with the addition of some alcohol have a beneficial influence. In febrile states, cold, sour or effervescent drinks act as antipyretics. Hot tea, coffee, kola, alcohol are excellent hot stimulants. Warm drinks taken slowly have a sedative influence. A glass of warm milk taken at bed time acts as a soporific and a glass of beer, poppy seed and lettuce have a hypnotic influence.

The diuretic effect of milk, soup, radishes, onions, sugar, grapes, etc., are well known and can be considered almost as specifics. A vegetable diet diminishes and a meat diet raises the acidity of the urine.

Warm and sour drinks act as sudorifics. Alcohol on the contrary checks the secretions of the sweat glands.

Fennel tea, soups and beer act as lactogogus. Garlic and sweet warm drinks act as expectorants. Gelatine acts as a styptic. Pumpkin seed is an excellent anthelminthic. There is no better alterative than cod liver oil, nor is there a surer cholagogue than olive oil. Meat, eggs, and wine as well as celery, radishes and garlic are reputed as aphrodisiacs.

As will be seen, this brief enumeration contain statements some of which are based upon popular belief not verified by scientific observation, and others that have stood the test of careful and painstaking study, like the diuretics, anthelminthics, antidiarrhea and anticonstipation foods.

One who cannot grasp the idea that food in disease should be administered with a view of its therapeutic influence should remember the special diet cures for diabetes, obesity, etc., which consist of proteids; the diet cures of nephritis which consists of carbohydrates. Exclusive milk diet is considered a specific in neurasthenia, in mitral and aortic valvular disease, hepatic cirrhosis, gastric ulcer, chronic enteritis. I will mention only the grape cure in tuberculosis and bladder trouble, the orange cure in hysteria, the various milk products—whey cure in bronchitis, kefir and koumis cure in gastrointestinal, kidney, liver and lung troubles.

Notwithstanding the fact that various cures which are characterized by limiting nutrition to one article of diet, and for which I should be permitted to coin a new word, "monodiet," have been practiced, some for centuries, and others for decades, only a few of the monodiets have been studied from a strictly scientific standpoint. The classic book of Weir-Mitchell, *Fat and Blood*, wherein are recorded many valuable and interesting observations on the treatment of neurasthenia by a strictly milk diet, approaches the ideal study of the therapeutic value of a monodiet. But even milk diet must be studied over again. For when Weir-Mitchell published the first edition of his work (1877) and even as late as the seventh edition (1898) the clinical study of feces was in its infancy and therefore one of the most important sources of information was almost wholly omitted.

A very interesting and curious book is that of the *Relation of Alimentation and Diseases*, by J. H. Salisbury (published in 1880), the originator of the meat and hot-water diet. He tells us in the preface that in 1854 in one of his solitary hours the idea occurred to him to try the effect of living

exclusively upon one food at a time. The works on physiology of that day placed beans at the head of the list of foods containing the most nutriment. He opened, therefore, his experiments with the regime of baked beans. He did not live upon the food for more than three days, when, as he expressed himself, "light began to break." He suffered from flatulence, constipation, dizziness, and became wholly unfitted for mental work. Dr. Salisbury conducted a series of experiments upon himself and upon individuals whom he hired for that purpose. I shall not refer to the conclusions at which he arrived, some of which are sane, and the majority of which are unwarranted, illogical and puerile. I wish, nevertheless, to pay a tribute to the man who more than fifty years ago dared to take up these studies and subjected himself to all kinds of mono- and poly-diets. Dr. Lynch of Australia contributed recently some very valuable data to the study of monodiets. He relates that while he conducted some rigorous experiments upon himself he was at one time at the brink of death.

That one article of diet if used by itself or in large quantities will produce different physiological effects than when taken as a part of a mixed diet is a matter of every day observation. That evidence becomes stronger when we compare the effect of pumpkin seed as an antheleminthic when taken by itself and its failure to produce the same effect when taken as a part of a general diet.

The Russian peasants love pumpkin seed not less than the negro loves watermelon. They eat them like the sunflower seed in large quantities and nevertheless they are pestered with intestinal parasites, simply because they never make a meal exclusively of pumpkin seed, but use them as a delicacy after meals.

The most convincing proof of the therapeutic value of diet is furnished by the proteids. Since Brown Sequard, in 1890, presented his paper before the Societe de Biologie on the treatment of impotence by the use of an extract of testicles almost every organ of the known edible animals was used as a therapeutic agent in the treatment of some pathologic conditions of a corresponding organ in man. The expectations of the great man who laid the foundations of scientific organotherapy has not been fully realized. Testiculin did not prove a solace to the impotent and subsequent flooding of the market with cerebrin medullin, neurin, cardin, oopherin, pulmonin, dydimin,, prostatin, etc., have so far only burdened our medical vocabulary. Yet as a result of these studies we have two organic derivatives which have proved a great boon to humanity and to our profession; namely, thyroedin and adrenalin.

The diagnostic value of food is another subject which has received but scant attention. Only one form of it is known to the profession; namely, the test meal given for the purpose of making an examination of the stomach contents. After twenty-five years of experimentation it was found that the simplest test meal, the Boas-Ewald test breakfast which consists of one article of food—bread—has proven to be the best test meal. This has suggested to me some ten years ago the idea to introduce the diet-test in all complicated gastro-intestinal disorders. In nine out of ten cases of chronic gastric disorders the diagnosis cannot be made during the first visit of the patient. After the diagnosis is made the next difficult problem to solve is the kind of diet which should be prescribed. In spite of careful logical reasoning it frequently happens that theory and practice

of diet-lists do not coincide. When the diet prescribed does not produce the desired effect and a new diet is ordered, the faith of the patient in the ability of his physician gets the first jolt; and when the new diet again proves a failure and the third list is substituted, the patient realized that his healer is doing the guessing game. I have, therefore, adopted and practiced for the last ten years the method of diet-test, which consists in prescribing a regime of one article of food at a time. The patient is told that this diet is simply given to test the digestive capacity of the stomach and intestines; he knows that I am experimenting and therefore, he takes an interest in the proceedings from day to day. I prescribe as a rule a nonodiet, say, of milk for two, three or five days. I may then change it to a monodiet of meat for two or three days; then follow it by an exclusive diet of rice or bread, etc. Both the patient and the physician watch the subjective symptoms with a great deal of interest, and in the meanwhile the stomach contents, the feces and the urine are examined, and the provisional diagnosis is either verified or rejected. These diet tests have been of a great deal of help to me. I have found more and more functional disturbances of the stomach and the intestines which were due solely to dietetic errors; distressing symptoms due to the eating of eggs, oatmeal, and especially coffee. In many cases annoying symptoms have disappeared by the use of monodiet alone. Schmidt of Dresden elaborated a test diet for the purpose of examining the function of the intestines which is composed of milk, zwieback, eggs, butter, beef, potatoes and oatmeal. I have found this diet test slightly modified of a great deal of value, and as illuminating as the test breakfast for the examination of the stomach contents. I am fully convinced that the time is not

far distant when the diet-test for the examination of feces will become as much a routine with all practitioners as that of the examination of the urine.

Boas has found that the giving of wine to a patient will help to make a differential diagnosis between ulcer of the stomach and duodenum. Von Noorden has adopted a test diet which he uses in all cases of diabetes and with which he tests the glycogenic function of the kidneys.

I wish to conclude my paper by pointing to the following thoughts which I endeavored to present:

1. That the study of the therapeutic and diagnostic actions of food is a desideratum.
2. That the physician when prescribing a diet should first of all have in mind the therapeutic action of the diet.
3. That the diet-test which consists of diets limited to one article of food should be prescribed in all cases of chronic gastrointestinal disorders.
4. That the test diet for the examination of the intestinal contents ought to become as popular as the test breakfast for the examination of the stomach contents.

#### Discussion.

Dr. E. C. Hill: The subject of diet is one of the most important subjects in medicine in the treatment of most chronic diseases.

The doctor's paper is quite a helpful one along this line, although I do not agree with him in all particulars. As to the use of monodiets, I can see where they would be quite serviceable in cases of obesity if we simply wished to make the patient tired of food, and in that way reduce the weight. We can get at the cause of dietary troubles more readily by a little knowledge of physiologic chemistry than by trying one thing and then another. A case I had last year will illustrate that point very well.

A young man was so troubled with offensive gas from the stomach that he had to wear a napkin constantly, dipped in some antiseptic. He came to me. I examined the stom-



ach contents and found nothing the matter there. I inquired about his diet and found that he was eating six eggs a day regularly to keep up strength. Formerly, he lived in the country, but on coming to town he did not digest his eggs very well, and all his trouble was cleared up at once by stopping that one part of his food.

Dietary lists are the most uninteresting and the most difficult to remember of anything in medicine; but if we will use a moderate amount of our knowledge of physiologic chemistry we can usually make out a list of things which a patient can use with considerable satisfaction. In all chronic cases I write out the diet for the patient explicitly.

Let us take a few examples, for instance, water. If there is pyloric obstruction, we know that there can only be about one-tenth of the water absorbed from the stomach that is taken into it; therefore, we should give little water by the stomach, but most of it by the colon. In heart diseases we should restrict the use of water, on account of the increased labor put upon the heart. We are pretty certain that common salt is a source of the hydrochloric acid of the stomach, which is necessary to the action of the pepsin of the stomach, therefore, salty foods are useless in asthenic cases or cases of hypochlorhydria or ordinary dyspepsia. We give salt freely in these conditions, but we limit it in conditions of hyperchlorhydria, such as gastric ulcer. The primary effect of taking salt is to diminish the amount of hydrochloric acid, but I believe physiologists agree that the general effect of taking salt is to increase this acid. Milk requires only one-third the digestive power of bread; therefore, it is useful in nervous cases, in anorexia nervosa, and other neurasthenic conditions, provided that there are no contraindications, such as a weak heart. Spices increase the flow of gastric juice mainly by reflex action through the nerves of taste, but they also have an irritating action locally on the mucous membrane, and they are therefore contraindicated in hyperesthenic and irritative conditions, such as gastric ulcer, although they are useful in cases of atonic dyspepsia and hypochlorhydria. Fats inhibit the secretion of acid largely, and therefore are most useful as a food in gastric ulcer and in other irritative conditions of the stomach in which we have an excess of acid. Eggs are helpful, too, because they contain much fat, but meats are not so good.

The President: This subject is interesting in that it has a bearing on the typhoid fever problem, in which you are all interested, and I hope that the paper will be further discussed.

Dr. E. Stuver: There are a couple of points in connection with this excellent paper that ought to be emphasized, and one of them is the use of coffee. My experience in this high altitude for the last twenty-six years has been that coffee does not agree with a large percentage of people. I have noticed a large number of people who were troubled with dyspeptic affections; also heart troubles, in which the cutting out of coffee eliminated a large amount of the trouble almost immediately. Furthermore, I have also found that the use of alcoholic liquors ought to be limited in this altitude. I have made careful notes of about one hundred cases of typhoid fever, especially the earlier ones which I treated with a certain amount of alcohol, and the latter ones with none at all, and I have found that typhoid fever cases get along much better without any alcoholic stimulants whatever. These are the two points I wish to make.

Dr. J. Elvin Courtney: I would like to ask Dr. Spivak to say something in closing the discussion with reference to the popular idea of little or no breakfast. As we all know, there is prevalent the idea that we can go without breakfast almost, limiting it to some cereal and coffee, or what may be called scaled or dried cereals, the ash and body of which cannot weigh but a few grains when washed. Of course, cream and sugar count for something. There are quite a number of people who take considerable pride in saying how little they take for breakfast. They have peanut butter, a little cereal, a drop or two of cream, etc., for breakfast. I have had some doubt myself as to whether that is a good thing, yet the popular idea is strong. A great many people attribute their improved health to the cutting out of bacon, eggs, and potatoes, bread, coffee, etc. I would like to hear what Dr. Spivak has to say on that side of the subject, as I think it deserves more than a passing notice. It is quite a fad, or has been. It is rather dying out now, but still it prevails to a greater or less extent.

Dr. Will H. Swan: The question of diet in the treatment of diseases is a very important subject. I think all of us are getting to realize, if we have not done so long ago, that very much depends upon the regulation of a patient's diet, in fact, more than the giving

of medicine, or many other measures that we institute in these cases.

I would like to have Dr. Spivak say something relative to the question of milk in the treatment of typhoid fever, and give us a statement of what the theories are as to its influence on bacterial growth in the intestine; whether we should continue to use it freely in the treatment of typhoid fever, or whether patients should abstain from its use to a greater or less degree.

Dr. Spivak, in closing the discussion, said: I cannot take up all of the time that would be necessary to answer all of the points and questions that have been asked. If the members have the impression that every patient that comes into my office is immediately put on a mono-diet, then it is clear to me that I did not make myself clearly understood in my paper. It would seem from Dr. Hill's remarks that the mono-diet which I advocate is not a good thing as a diet in general. I do not put a patient on a mono-diet for the purpose of dieting him, but I put him on a certain limited diet for the purpose of arriving at a diagnosis of his case. I do not know what better diet can be given a patient, without fear of decreasing the strength and weight of the patient, than to put him on a simple milk diet.

As to the question of no-breakfast, I can say this much: To make it a national diet would be ridiculous. People who work in quarries and do hard manual labor, must have heavier foods, and breakfast should be one of the most important meals of the day.

As to dyspepsia, let us take the dwellers of cities. If we take one hundred persons in this city, or any other, and make a careful inquiry as to the condition of their stomachs, we will find that a large proportion of them will complain of something, perhaps a little fullness, a little gas in the stomach, heart-burn, a bad taste in the mouth, or they are sleepy after taking a hearty meal. You will find that the dyspeptic is with us all the time. There are large numbers of them, and I really do not see anything better, as a general rule, for dyspeptics, with certain exceptions, than to diminish their diet. There is no reason why any healthy man, after taking a good dinner, should feel heavy at the pit of the stomach. Therefore, the no-breakfast regime is, in a good many cases, the right thing to observe. People who eat too much should diminish the quantity of food at each meal, and in some cases, those who do hard work mentally should go with-

out breakfast, and continue this plan for some time. Hemmeter speaks of no-breakfast in his book, *Diseases of the Stomach*, and that he adopted that regime on account of dyspeptic symptoms, from which he is now free.

Some of the members of this society may not know that in England gastro-enterologists have adopted this diet many years ago. It is not a fad. Dr. Dewey wrote a book entitled **Right Living** some twenty years ago, for which he could not find a publisher in the United States. In this book he advocates the no-breakfast regime. The book was published in England seventeen years ago.

It was published in the United States only a few years ago, and at this late hour they begin to consider it an interesting and instructive book. Dr. Dewey is a practitioner in a small town in Pennsylvania, who has seen the day a prophet was honored in his own country.

As to the question of typhoid fever, I cannot take it up and discuss it at the present time, although theoretically I have followed up some of the literature in reference to this disease. I have not had any experience, sufficient to give you an authoritative statement as to diet in typhoid fever. In my cases of typhoid fever I have found that the soup diet, so well known here, as Dr. Whitney's compound, has done more good than any other preparation. The soup is made of barley, meat and water, boiled long and slowly. This soup-diet has carried my patients with typhoid fever through the course of the disease with better results than have been obtained with milk.

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### *HAS REGULAR MEDICINE KEPT PACE WITH THE ART OF HEALING?*

By J. K. MILLER, M. D., Greeley, Colo.

The healing art has been practiced from the earliest prehistoric time. Its beginnings were coincident with injury, sickness and processes of decay in the human family. For many ages the remedies chiefly used upon the afflicted were such as were begotten in superstition because of the belief that all disease resulted from the influences of evil spirits or were caused by the displeasure of offended divinities. Doctors of these early

times were regarded as more than human and were worshiped in temples erected to their honor. The mysterious power over demons and the intimate relation with the oracles assumed by priest and clergy were also recognized for many centuries—and is in some degree extant today.

Previous to the last two centuries, the art made some progress scientifically. It was, however, still wrapped in superstition, exorcism and the prayers of sacerdotalism. There was as yet scarce enough truth known for a standard around which leaders might rally. Injections were not practiced, anesthesia not discovered and the fever thermometer unknown.

A great impulse was given to the primitive science about the middle of the eighteenth century through the skill and investigations of such men as Pott, John Hunter and his pupils—Abernathy and Jenner. Schools of medicine began to be established in Europe and America. Theory and speculation gave way in a measure to higher devotion to technical and scientific investigation. Diversified views, however, were held as the Alchemist's belief in a sovereign and universal remedy and the one force or principle of the Vitalist. These views with others were too narrow and too feebly supported to be enduring. The sterner, more practical—though scarce less theoretical—system maintained a stronger support and developed without serious hindrance until near the close of the century regarding the doctrine of "contraries" as fundamental.

It was about this time that the doctrine of "similars" was discovered or rediscovered by Hanemann. It was in direct opposition to that which had been supported hitherto and was a reaction from the cruel practice of excessive blood-letting and the reckless administration of drastic decoctions which had been resort-

ed to for even trifling difficulties, thereby increasing rather than lessening mortality.

The homeopath by which term the advocate of this new school became known, had the faith of an honest if not errorless conviction. He had "*vis medicatrix natura*" on his side, though ignorant of the fact. Since twenty-eight cases out of twenty-nine in modern times get well with treatment, without treatment and in spite of treatment through the power of nature to protect and restore herself, it can readily be seen how the expectant system of homeopathy achieved in the eyes of the laity brilliant results in a period so limited in knowledge and skill.

There is no doubt but that the regular school of practice contained the more fundamental principles of true medicine so far as was then known to the world but the prominence into which the homeopath so quickly sprang made the regulars early recognize in him a more formidable opponent than had hitherto been encountered. Needless to say he was systematically opposed and declared a quack and charlatan. He has, nevertheless, climbed up against odds, and now occupies positions of trust and honor side by side in municipal, state and government positions. More than this, the regular has so modified his ethics that he gladly meets him on the basis of consultation equality. Whether this step was one of recognized worthiness or simply one of policy, we do not say. As a further result of the promulgation of this doctrine of "similars," the regular has today more sightly and more palatable mixtures with less dosage and more conservative administration than would have been obtained without this competition.

There have arisen within the present generation new cults which are demanding recognition from both laity and state. They claim the older schools have served



their time, are antiquated and are not abreast with the advance guard in the progress of the world of science. They, therefore, clamor for an abolition of all material remedies, claiming that in the light of advanced thought and fuller knowledge of laws governing science, all ills afflicting humanity may be cured through manipulation, faith or mental influence.

When we look back half a century or more with the noonday light of modern knowledge of disease, no one hesitates to say that there was greatest need for more intelligent management of the afflicted. More than this—all are willing to admit that today with all our progress there is still great opportunity for advancement along the same lines. There is yet too much medicine taken and too much prescribed. Any reasonable doubter can be convinced of this fact if his attention be called to the enormous fortunes accumulated by the manufacturers of drugs of various kinds. We refer not to patent medicines only, but to the ethical products as well. These great sources of drug production which have sprung up in so comparatively short time, could not have so rapidly developed had there not been extensive active agencies in the field for the distribution of their wares. Not the least of these agencies are the drug store which solicits your patronage and mine, and the physician's prescription.

There is a large class of people among whom the auto-ingestion of drugs is without doubt a fad. They want something "to make them feel rested when tired; to make them feel well when sick; and to make them feel happy when miserable." This fact has much to do in the extensive manufacture of certain compounds and is to be condemned. But are we physicians above blame in this matter of unscientific therapy? Are we sure that the enormous output of ethical remedies is

worth while? Are we from their administration getting results which justify such extravagant expenditure? Are our numerous prescriptions prompted by an unbounded knowledge of and faith in drug treatment? Are they not usually given with the hope for good results rather than with the absolute faith and knowledge that such will be realized? Do not our patients many times return unbenefited by a former prescription without awakening any special surprise on our part?

Is it not possible for us to be long on the science and short on the art of medicine? That is, do we not find ourselves treating the disease rather than the patient—falling into a sort of routine, associating certain remedies with certain diseases regardless of what the patient's condition indicates? Has not the general public picked up the practice of self-prescribing by observing the profession's method of classifying drugs and diseases together? The prescription files in our drug stores also show that a large per cent of physicians' prescriptions call for proprietary or secret compounds and the laity have abundant opportunity of reading the testimonials of graduate physicians endorsing such preparations, thus making easy the all too prevalent practice of self-prescribing. Legislation can do but little good so long as this is true. Enterprising drug firms keep agents constantly in the field to introduce their specialties and their palatable mixtures dispensed in attractive packages not only make prescription writing easy but economize the time of the busy practitioner. It is much easier to prescribe some compound which is a "perfect marvel" of the apothecary's art than to study out an original formula.

Our medical journals also are participants crimines in this matter of irregular and non-intelligent drug distribution.

They demand a careful recognition of the ethical code; that its every law be kept inviolate, yet in their advertising columns they have room to notice these all but secret remedies.

This review has been given to show that medicine has been over-emphasized not only to the neglect of other intelligent means but to the detriment of its own interests. There are many conditions we have yet to recognize wherein drugs do not obtain and the use of them in such cases is as unintelligent and irregular as many of the procedures of the veriest charlatan. The art of healing has so progressed that its requirements are much greater than can be met by drug treatment. While the profession is awaking to this fact, it has been too slow and heterodox practitioners have entered our field disturbing in no small degree our patronage and public prestige. We may be loathe to admit this fact but the public sees them succeed where we have failed; sees them gaining year by year; sees their field widening, their number increasing and sees your patients and mine going out and in their doors.

Though strongly prejudiced against them, we can no longer afford to deny that their methods embrace some true principles. These may be said to have been borrowed, or stolen possibly, from our system where they have long been lying unutilized. These they surround with the queer and the mysterious and with some semblance of intelligence proceed to launch a practical system of healing. We oppose them—certainly. We declare them faddists, ignoramuses and dangerous fellows. We warn the public against them. We contrast our knowledge with their ignorance. The great tribunals of the land, however, point to their successes and our failures and grant to them the same legal courtesies we regulars enjoy. Our op-

position they charge up to professional jealousy.

Were we in perfect adjustment with the requirements of the work to be done, these new systems would have no room to come in; but they are here and flourishing because of their adaptation to many conditions existing.

When we realize that the chief element in man is spirit not matter, that he is not a body with a soul but is a soul with a material body, we will not only better understand how these anti-drug systems meet with the success they have, but will more fully appreciate the need for using psychic measures to a greater extent than we now do. Our drug prescriptions are addressed largely to the material part yet we know the spiritual element is quite as prone to disease but is much less susceptible to medicinal influence. Many patients bring to us ailments which the most skillful pathologist cannot demonstrate. Is it not very unscientific for us to address drug remedies to many of those conditions? Are we successful when we do? Are these not the cases over which we worry and burn midnight oil to no purpose and who some morning greet us with the cheerful information "we have decided to try Christian Science?"

There is another feature of this question which must not be overlooked. The psychic nature of today is more sensitive and impressionable than that of a half century ago for we live in a time when the nervous system is over-stimulated and over developed. "We are going to seed at the top" as one has expressed it. The high tension of the business man, of the tradesman and the educator, the excessive, oftentimes hysterical, demands of society are not conducive to nerve power and enduring physique. Especially is this true when pressure is brought to bear upon the child from the time he has a birthday to celebrate on throughout the

entire period of his development under the high pressure fads of modern education and the prematuring influences of social dissipation.

As proof of this statement, we may cite puerile precociousness, ocular defects, perversions, neuroses, insanity, etc., all of which stand at a higher pro rata than has hitherto existed. That a lowered mentality is being produced is observed in the fact that there are no great minds today to mark this period of the world's history. No great literary lights, no poets, no musicians, no theologians to compare with those which history brings down from the past. We have minds of greatest ingenuity, it is true, but the genius is a freak having a narrow mental scope.

Furthermore, our best minds, the most promising, the most brilliant are cut off in the midst of their days. Our strongest characters, finest physiques, we see succumb at a period of life in which they should be the world's tower of strength. This shortened longevity comes not as a result of over-work but as a dissipation of the energies of mind and body—a dissipation begotten in the weakened power of the will which deprives of self control, that balance wheel and governor of appetite and passion.

This unstable, aberrant tendency in the nervous system of present generations, brought about by the strain of modern life in its search for wealth and luxury and attendant dissipations, forms not only the basis for these new systems of psychotherapy which have recently arisen but has created a demand for such treatment in an ever-growing number of conditions wherein medicine does not obtain. The laity have learned of the uncertainty of medicine and are ready to take up with that which promises more. Observation shows that this tendency is in no sense peculiar to the illiterate or lower classes, but is in fact chiefly observable among

the more educated and intelligent people—those whose patronage we are pleased to have, but we cannot meet their requirements as they have grown weary of medication and look elsewhere. We have been so long and so closely wedded to medicine that the public does not expect from us anything else. We are endeavoring to meet it part way with our placebo tablets and colored liquids but we cannot through them secure the recognition as do the Divine Healer and the Christian Scientist who so ostentatiously pose as special servants of the Lord and claim to have the faculty of adducing power as yet unknown to science.

There was a time when regular medicine was recognized as the only star in the scientific heavens in the management of disease, but conditions have changed more rapidly than its methods and we are behind today in the art of healing because we spend most effort upon the science of medicine and adhere to drug treatment when conditions in the human system have been so modified that the practice of psycho-therapy is essential in a degree much greater than ever before. It must be utilized by us more if we would check the modern trend of our patronage toward the camp of the irregular. We must give more thought and more scientific consideration to the influence of the mind over the body that is diseased. Mind cure is not new. It has long been an accepted fact. History for centuries back records again and again the healing of the sick; the casting out of demons and even the raising of the dead through its power. While much of the historic record may be questioned, there remains enough evidence, undoubted and acknowledged, to show that many of the diseases and ills of humanity have been and are now being cured through proper impres-



sions made upon the mind of the afflicted.

Hypnotic suggestion as a therapeutic measure is more or less used. There is sometimes objection raised to it. It is often difficult and impracticable. It is, however, not different in kind from other forms which may be successfully used. Our psychic powers, therapeutically employed, are greater than we realize and are often our most potent factor.

In almost every case we have much or all to do with that element of man which never sleeps. We may call it the ego, the subjective mind, the subconscious self or what not but let it be remembered that it is open to psychic influence and oftentimes much more susceptible to it than to medication. Let us continue to practice medicine but let every dose be prescribed with this thought in view. Let drug shops be established whose business is limited to ethical pharmacy that our patrons may be subjected as little as possible to the suggestive patent medicine placard which present day druggists flaunt from case and window.

Let us not forget that present day conditions demand more than ever before the use of psycho-therapy.

#### Discussion.

Dr. Howell T. Pershing: I am heartily glad to see that so much attention is being paid to the subject of psychotherapy at this time. I myself have done something in advocacy of it before this society, and also before my section in the American Medical Association. In the main I heartily agree with Dr. Miller in his presentation of this subject. There are certain things which I would prefer to put in a rather different way, and I shall be free to dissent from the conclusions of the paper as well as to assent.

There is no questioning that the profession has been rather slow in recognizing the mental factors in the causation and cure of disease. There is no question but that those factors are really of very great importance. Disease may be caused by purely physical factors, as we all know. It may be caused by purely mental factors. For example, a case of palpitation

of the heart may be due not to any disturbance of the heart primarily, but to a disturbed emotional condition, and the proper cure consists in removing the emotional condition. On the other hand, the emotional condition may be caused by a purely physical disturbance of the heart, and to attempt to treat that emotional condition along the lines of psychotherapy would be a great blunder. There are certain cases where a few doses of strophanthus, or digitalis, or spartein, will do far more to remedy the emotional condition than any amount of reassurance. Many of the purely mental diseases, as we ordinarily understand them, have physical causes. They must not be treated by psychotherapy, but by physical measures. Melancholia is an example. We have only to think of a deficiency in the secretion of the thyroid glands, which is purely physical, which causes myxedema with its accompanying dementia; and how, on the other hand, an excess of the secretion of the thyroid gland may cause a terrible mental disturbance that we see in advanced cases of exophthalmic goitre, to realize that this is a complicated subject. It is not simple.

Now, the man who is to treat any disease must be a good diagnostician first. He must recognize the disease; he must recognize the elements in its causation, and he must apply the remedies that are indicated by the nature of the disease and the nature of the cause, and he will not need to rely on *materia medica* alone, not on psychic influence alone, but on both. In almost all cases of disease we need the proper combination of remedies that is accurately fitted to the case in hand, and this usually involves a study of both the physical and psychical. I do not like to hear drugs decried quite as much as they are in the present day. I know they are enormously overused. I know they are uselessly prescribed, but I also know that in skillful hands they are of inestimable benefit to patients. We say too much about the uselessness of drugs in certain cases, and those who need this combination of treatment in mental cases will go to a neurologist prejudiced against the drugs they need.

I do not agree with the essayist in saying that we must emphasize psychic rather than material remedies. That is not so. I would say, it is our duty to emphasize psychic remedies in addition to the material remedies. The profession has not been so much at fault. The profession has developed according to the needs of the time and according to the knowl-

edge of the times. Naturally, its first efforts were devoted to the healing of wounds, to the remedying of fractures, and dislocations, to the curing of malaria and other infectious diseases, and in the majority of cases material remedies are the ones that are the most important. Mercury, iodide of potassium, diphtheria antitoxin, thyroid extract, digitalis, strychnia—such remedies as those given in cases to which they are adapted and where they are necessary are always more important than the psychic influence. Psychic influence may come in incidentally. On the other hand, in the great group of diseases represented by hysteria, the psychic influence will always be more important than the material ones. Taking the profession at large, the importance of the material factor in the cure of disease must be far greater than the psychic factor. But coming down to a limited group of diseases, especially hysteria and certain forms of neurasthenia psychotherapy is pre-eminent, but it must be used by one who knows medicine, one who knows his anatomy, physiology, pathology, and the physiological action of drugs, and even in those cases, drugs, if skilfully used, are of immense benefit. One can often by the aid of proper drugs applied as psychotherapeutic measures do vastly better for his patients than he can without them. Mind is a late development. The mind will depend very largely upon its material substrata, and we have only to observe its effect by alcohol, ether and chloroform, and various poisons, or by a tap on the skull causing concussion. We have only to think of those things to realize that it must depend upon a sound physical body; and, therefore, while those who make a specialty of treating neurotic affections must use psychotherapy, still the whole profession at large must recognize that there is a mind, and that it has its influence on all patients. Nevertheless, we must use these things in proportion. Let us cultivate the whole field of medicine and try to see it all in proportion.

Dr. Edmond J. A. Rogers: I did not expect to say anything on this subject just now, but since the president has called upon me, I will say a few words.

First, I wish to take advantage of the opportunity to thank the essayist for his excellent paper, and to express my appreciation of his courage in presenting it here at this time. He has brought a subject before us that is of vast interest to the medical profession, one

in which we are now only beginning to realize its great interest and importance.

While I do not grasp all the ideas of the author, I agree with him in the main. Yet he has only made a few suggestions in a great department of practical medicine. I think I more fully agree with his position than I do with the objections raised by Dr. Pershing, although I fully agree with Dr. Pershing as to the efficacy of administered medicines. There is no conflict between the ideas of mental therapeutics and the administration of drugs. Indeed these two practices work so closely together that it is a question whether either can be efficacious without the help of the other.

The medical profession has made a terrible mistake in allowing mental therapeutics to slip from its control, and to fall into the hands of philosophical theorists, and unphilosophical organizations of doubtful integrity. It is a legitimate department of medicine and should be studied by all medical men and taught in our medical schools.

It is too great a subject, however, to cover in a five-minute discussion, and I wish we could have postponed its discussion entirely until after we had heard the promised address upon the subject to be delivered by Dr. Cabot tomorrow afternoon.

Dr. Carroll E. Edson: The subject of the paper is, "Has Regular Medicine Kept Pace With the Art of Healing?" The discussion has assumed that the art of healing is psychotherapy. The mistake we make, as Dr. Pershing intimated, is that at one time we limited our art to wound healing, etc., and now we wish to limit it, as some of the speakers intimated, very largely to psychic remedies. If one reviews the history of the development of medicine, the physician, or better, what may be called today the regular profession, has been always one in which a few of its members have been ahead of the times, and the vast majority of its members have been behind that period. The regular profession has been somewhat of a guild. It has suffered undoubtedly by trying to reach the arcanum of secrets of the healing art, and not admitting anything which it did not see and understand.

Scientific medicine has always been the possession of a few. The new discoveries in the science of medicine have been slow to percolate through the masses of the profession, which, as a whole, has always been a generation behind its leaders in its use of the means at its command for remedying disease; and this

art has always been wider spread than the science, because much of the art of medicine is empirical, is experimental, grossly so, and can only be brought to the standard and test of a scientific basis by those who go more slowly and more thoughtfully. The history of medicine will show this, I am sure, and the physician of today partakes of that same difficulty in regard to psychotherapy.

A word or two as to the use of drugs which Dr. Pershing has referred to. The mass of regular practitioners of medicine, are as crude today, as ignorant and as superstitious in their use of drugs as our forefathers were supposed to be, and they use these drugs with no idea of their physiological action. The average medical student today does not know well and thoroughly the physiological action of drugs, I think for one reason, because there are few who can teach him their physiological action. The keen and discriminating selection of remedies, which were better known a generation ago, to a certain extent, than now, is being lost, and only slowly regained from the point of view of scientific pharmacology. The period first succeeding their education was one of enthusiastic growth of pathological anatomy, bacteriology, the basis of scientific medicine, in which the foundation of disease were being studied, and since the human mind has always had its limitations and has been able to take up but one thing at a time, it is rather ataxic in its progress, and the school of Rokitsansky, of Vienna, was devoted wholly to a scientific study of the foundations of disease while the art of healing was let alone.

Dr. Miller (closing the discussion): It took a good deal of courage on my part to bring this matter before the state society, because of its being somewhat premature and because of my inability to handle it thoroughly. I thought, however, we might provoke a discussion that would help us to think a little more about something else than medicine. I have not decried medicine. The paper was too short to leave one free from criticism in the treatment of this subject, but my object was to call your attention to the point that we had other things at our command which we professed to use, but are allowing to lie unutilized. I am much pleased with the remarks that have been made.

One of the speakers said that our theory and experience do not always coincide, and that is a fact. In my paper, if you will remember, I said that we were long on science and short

on art; that we want to know how to use what we know, not that we want to know less, but how to use more what we know.

Dr. Edson referred to our knowledge of drugs. Our medical colleges are not teaching *materia medica* today as they once did, and we are taking the traveling man's dictum of this and that and of other men's say-so, without really knowing the whys and wherefores, or the active principles, or sources from which the active principles come. Every medical college today ought to have a chair of psychotherapy. It is one of the means in the treatment of disease, and a very important one. I tried to emphasize the fact in my paper that we are more susceptible to mental influence today than we were formerly, and that is why we need to follow every dose of medicine we give with suggestion.

I might illustrate what I mean by citing a case which I was called to see some months ago in the country. On visiting the patient I thought she had hysteria but was not quite sure so left some placebo tablets. A few days later a daughter with whom she was staying phoned me that her mother wanted some more of the first tablets I gave sent out, as they gave her more relief than the medicine I left last. I replied that I would send more, but to tell her mother to use them cautiously, for I did not want her to learn the habit of using them. I thus carried my suggestion further with helpful effect and did more probably than could have been accomplished by active medication without the suggestion.

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### THE SUCCESSFUL OBSTETRICIAN.

By D. V. MEIKLEJOHN, M. D., Somerset, Colo.

There are certain principles and procedures necessary for the successful obstetrician to follow. These are taught in our colleges, but how much more capable and self-reliant is the young physician who has been fortunate enough to have had practical bedside work before entering into private practice. Obstetrical art is one of the most, if not the most conservative branches of both med-



icine and surgery. I use the word surgery advisedly, for the obstetrician in country practice, at least, must be his own surgeon. That we may better understand and appreciate the eminence to which we have attained in any branch of medicine, it is well to look back and note some of the difficulties which have been overcome by those who have paved the way for us.

Aristotle said, over 2,000 years ago, "Probably all art and all wisdom have often been already fully explored, and again quite forgotten." In Egypt more than 2,000 B. C. podalic version was known. 1,500 B. C. Veda, or Book of Life, refers to and describes treatment in difficult labors. In the treatment of transverse presentation it advises "grasping the feet and producing a podalic version if possible."

I would like to say at this time, that I believe that opinion still exists among the majority of physicians, viz.: Grasping the feet if possible, while to me it seems much easier in the majority of cases to reach the head, bringing it down, and converting it into normal presentation, thereby bringing about dilatation in a more efficient and natural way, and avoiding the after coming head, which in many instances is difficult and delays labor.

About the year 1640 the forceps were devised by a man named Chamberlain, who held the invention as a family secret until he amassed a fortune. The instruments were used frequently with indifferent success, due largely to carelessness in the technique of preparing the patient, and the knowledge of asepsis.

With the advent of Listerism in surgery, came greater care in the preparation of our obstetrical cases with a result that that dreaded condition—puerperal sepsis—is almost a thing of the past in maternity hospitals, or even in our pri-

ivate homes where sanitary and aseptic conditions prevail.

I know of no branch of medicine that needs so much thought and attention in our county and state societies, and yet receives so little, as the art of obstetrics. Fewer cases will ultimately find themselves in the hands of the gynecologist, if they were intelligently handled by the obstetrician.

In maternity wards it is easy for the nurse to have the labia and pubis shaved, vagina rendered sterile and with aseptic pad, but in private practice where the husband cannot afford a nurse, few rooms, with nothing done for patient upon arrival of physician, it is quite different. But I fully believe that we, whose lot it has been to be placed among the latter class, can obtain equally as good results as our more favored brothers by being students and observing the most rigid aseptic precautions. I have never tried the shaving of labia and pubis but once since my hospital practice, and it was so distasteful to the patient, who happened to be a minister's wife, so of course it was a free shave, that I discontinued the practice.

I believe the close cropping is a safe substitute, and with antiseptic douche, washing of external parts, and with sterile pad, the patient is well prepared for labor. The pernicious practice of frequent examinations ought to be discontinued after the physician has satisfied himself of the condition of the patient and presentation of the child. The sterile and antiseptic soaps on the market may be perfectly safe, but I feel much safer in sterilizing the green soap I carry, or the laundry soap we find in the homes for the scrubbing and lubricating of the hands.

The introducing of the fingers into the vagina to assist in the delivery of

the placenta by traction on its folds, I believe to be fraught with more or less danger of introducing infection and should be avoided if possible. The wearing of rubber gloves minimizes the danger, but certainly does not obviate it.

I have always used a slight traction on cord and delivered by Crede's method, notwithstanding that many good physicians condemn even the slightest traction on cord, but in my hands it has given only the best results without any undue post partem hemorrhage, the reason given for avoiding it. Perineal lacerations I repair at once, but have never repaired cervical lacerations until they have recovered from the lying-in period, and uterus has assumed its normal proportions, for it has been my observation that we get better results from operation and less shock to patient by deferring operation. In normal deliveries I always object to the vaginal douche, but by insisting upon the patient sitting in an upright position when urinating, I find that all discharges and blood clots escape, leaving the uterus and vagina in a cleanly condition. Then with a sterile pad of gauze or cotton, changed often enough to keep patient cleanly, washing the labia each time with sterile water, there will be no more odor than at a normal menstrual period.

Personally I do not think there is any merit in the abdominal binder, but when the patient expresses a desire for one, I apply it, unless I feel it is contra indicated, for I think it acts the role of a placebo in the majority of cases, conducive to neither good nor evil.

### BACTERIOLOGICAL DIAGNOSIS OF DIPHTHERIA.

By WM. C. MITCHELL, M. D., Denver,  
Colo.

Bacteriologist State Board of Health of Colorado, Professor of Bacteriology, Denver and Gross Medical College.

Few discoveries in medicine have been so far reaching in their effects for good

to humanity as has the discovery of the diphtheria bacillus.

This organism was first seen by Klebs in diphtheritic membranes in 1883, and in the following year was obtained in pure culture by Loeffler. Roux was next able to demonstrate that a powerful and soluble toxin was elaborated by this bacillus and Behring supplemented this investigation with the discovery of a specific curative agent, diphtheria antitoxin.

With the exception of the masterful demonstration by Koch of the tubercle bacillus and the experiments and evidence brought forward by him to substantiate his claims, to my mind, there is no greater demonstration in modern medicine than the epoch-making work of Loeffler's. The thoroughness of his research, the strict criticism to which he himself subjected it, and the moderation of his conclusions, all go to make his communication a monument and a pattern which all who take up work in this field will do well to follow.

One great difficulty in establishing the etiologic agent of diphtheria lay in the fact that our knowledge of the disease, dating as it does from Pierre Bretonneau (1825) had come to us without a positive and unequivocal factor. A local fibrinous exudate usually in the pharynx or larynx followed by constitutional symptoms of greater or less severity being the essentials of the disease, whenever this combination occurred, the case was regarded as one of genuine Bretonneau diphtheria. We now know that a fibrinous exudate may be caused by several different micro-organisms, notably the Klebs-Loeffler bacillus, the *streptococcus pyogenes*, the *staphylococcus pyogens aureus* and *albus* and the Friedlander's bacillus. The fact that these different bacteria could cause a local exudate and also constitutional symptoms of greater or less severity caused some opposition to the acceptance of

Löffler's bacillus as the etiologic agent of diphtheria. Baumgarten was the chief opponent, claiming that by calling only those cases diphtheria which exhibited the diphtheria bacillus and ruling out those cases which did not show this bacillus, that a *petitio principii* was established and that there was no good reason for saying that those cases which did not exhibit the bacillus were not diphtheria. As clinical and bacteriological investigation has progressed, however, it has become established beyond peradventure that genuine diphtheria is due to one cause and one cause only, namely, the diphtheria bacillus. No matter how closely a case may simulate diphtheria clinically, if the diphtheria bacillus is not present, the case is not one of diphtheria. Practically, there is a point here which is of greatest importance: The diphtheria bacillus may be present in the afflicted individual and it may not be demonstrated in the bacteriological examination. With the very best of care there will always be a certain per cent of unavoidable technical errors varying in different laboratories, in some more than in others. We must remember, however, the dictum of Escherich that "there is no case known of undoubted clinical diphtheria which upon proper examination has failed to reveal the Klebs-Löffler bacillus."

Since a mistake anywhere along the line of transit of the diphtheritic membrane from the throat to the culture tube and the microscope may lead to untrustworthy results, it may be well to emphasize the importance of safeguarding every possible source of error. The swab on which the membrane or exudate is to be collected must be sterile and should not be allowed to come in contact with anything except the patient's throat. Otherwise, it may collect extraneous bacteria or spores and become contaminated.

These extraneous germs often grow more readily on the media used to cultivate the diphtheria bacillus than the germs found in the throat. So that by keeping the swab from contact with the fingers, clothing, the floor, etc., one large chance of error is avoided. If one of the regulation sterile swabs cannot be obtained, an impromptu swab may be made by twisting sterile absorbent cotton on a piece of wire or hairpin and singeing the cotton in the flame to kill the bacteria taken from the fingers.

No antiseptic spray or gargle should be used in the throat for two or three hours before the taking of the specimen. Some of the exudate or membrane should then be taken on the swab, replaced in its container, and forwarded to the laboratory. In the case of an infant, a struggling child, or when the disease is in the larynx, it is not always an easy matter to obtain the proper material. It is hardly necessary to add that if the proper material is not on the swab, no amount of care in the remaining technique will give proper results.

When the specimen is received at the laboratory it is carefully inoculated on Löffler's blood serum and placed in the incubator at the temperature of the human body. It takes at least twelve hours for trustworthy growth of the diphtheria bacillus to develop and all specimens arriving at the laboratory up to 8 o'clock at night are reported on the following morning. If diphtheria bacilli are found, the case is to be regarded as diphtheria, no matter how mild the clinical symptoms have become in the meanwhile. If no diphtheria bacilli are found, it does not mean that the case is not one of diphtheria; it simply means that no evidence of diphtheria has been found in the specimen submitted. If the case is clinically one of diphtheria, even in the face of a negative report, the case should



be given antitoxin and another specimen sent in for examination. While every effort is made to give the most trustworthy reports possible, yet a certain percent of errors is unavoidable where a large amount of daily routine work is done. The work is safeguarded by every means in our power to keep the errors at a minimum.

A very vexing problem in the bacteriological control of diphtheria is the length of time which the bacillus persists in the throat of a patient who has entirely recovered from the systemic effects of the disease. In a series of carefully studied cases at the Denver Health Department, extending over a number of years, it was found that the average duration of the diphtheria bacillus in infected throats was twenty-two (22) days. Some cleaned up as soon as three days, and in some the bacilli persisted for two months and over. The longest case we have was one in which the bacilli persisted in the throat for 145 days. This bacillus, after eighty-one days in the throat, still secreted diphtheria toxin and was readily fatal to guinea pigs. This patient, and indeed, almost all others with persisting diphtheria bacilli in the throat, were well clinically after the first or second week of the disease. Such patients, however, should be regarded as afflicted with diphtheria and as capable of transmitting the disease to others as long as the bacilli persist in the throat. The wisdom of this view has been borne out by the work which has been conducted for a number of years at the State Home for Dependent Children.

In 1897 the late Health Commissioner Munn decided that no child should be admitted to this institution, no matter how healthy it apparently was, until a bacteriological examination of its throat had been made. Time and time again children who were apparently healthy

have been found to harbor in their throats and nasal passages genuine and virulent diphtheria bacilli. In practically all of these cases a history of exposure to other sick children has been obtained, or the children themselves have admitted being sick with colds or sore throats sometime immediately prior to their admission. Those cases exhibiting diphtheria bacilli have been quarantined until the germs have disappeared from their throats. Occasionally such a child developed clinical diphtheria while undergoing quarantine. Most of these cases have cleared up in ten days, but one took six weeks before the bacilli disappeared. Since this method has been in vogue, now nine years, there has been but one case of diphtheria develop in the institution, an institution which has from 200 to 250 children on its roll all the time. There was one case which developed diphtheria clinically with bacilli in its throat three days after it had been admitted. This case undoubtedly had the bacilli in its throat when it was admitted, although an examination made by me at the time of its admittance was negative. The error was due probably to my overlooking the bacilli in the examination, although it may have been that the proper swab was not taken. In a letter from Mr. Cowan, the able superintendent of the institution on this subject, he says: "There is no doubt in my mind but what the practice of taking cultures from every child has saved us hundreds of cases of diphtheria." From 1897 up to the present time (August 1906) we have had in all 678 new admissions. In addition to these there were a large number of children returned from private houses, the cultures having been taken from these the same as in new admissions.

These results were so gratifying that the same system has been adopted for

the Denver Orphans' Home and St. Vincent's Orphan Asylum. In so far as I am aware, these were the first institutions in the world to adopt this system.

In these nine years there were ninety-eight positive cases.

In concluding this paper, I would like to emphasize the importance of obtaining proper material on the swab for examination. If the proper material is not sent in no amount of care in the inoculation and examination will give adequate results. In the face of a negative report, if the case is clinically one of diphtheria, antitoxin should be administered and another specimen sent in for examination.

#### Discussion.

Dr. Hillkowitz: We were very much interested in Dr. Mitchell's paper because it was an extremely practical one. It did not deal in the technical aspects of the case. It was interesting to every practitioner, especially those remarks on the taking of the swab, a procedure which is very frequently neglected to take properly. We are apt to consider that the bacteriologist is infallible, and that the minute the swab is sent in to the Health Department a statement can at once be obtained, whereas the taking of the culture has to be done properly by the examining physician, in order to insure a correct report. This is of particular importance in taking the secondary swab in order to determine whether the child's throat is free from bacilli, because frequently the child has been under treatment and receiving sprays which will produce either a sterile swab altogether or some other germs will develop that are more responsive to the disinfectant than the diphtheria bacillus. So far as obtaining the swabs in children, it is not so difficult as imagined. Naturally the swab will come in contact with the tongue rather than with the exudate. If an assistant would hold the child and its hands, or wrap a sheet around the arms of the child, it would be very easy for the practitioner to get a good culture direct from the spot in which the disease is localized.

I am very pleased to corroborate what Dr. Mitchell has said with regard to the rules of procedure in the State Orphans' Home. I remember the time when I was connected with

the department, about nine years ago. Dr. Munn had me inoculate the children with antitoxin because there had been an epidemic in the home. Then they had to send the children out of the public school, and take a teacher into the home to keep up the school work. It seemed to have some effect in diminishing the number of cases of diphtheria, and together with the precaution of having every child examined before they came in, the institution soon became absolutely clear of the disease.

Dr. Cooper: I don't think that a paper of the quality of Dr. Mitchell's should go undiscussed. I think the points he has brought out should be further emphasized and the matter brought more closely before the general practitioner and those interested in hygiene who are in attendance. There was a time when Dr. Mitchell and I were much more closely associated in public health work than we are at the present, and it was not an uncommon thing for me to receive a letter from an outside physician—asking why a culture had not been reported upon in the first six hours, and upon calling Dr. Mitchell and reading the letter to him he would say: "Doctor, this culture came in a pill box and we cannot do anything with it." It seems that the man on the outside who sent that culture was terribly anxious, but he sent it in a pill box rather than go to the drug store and get a proper culture outfit. There is no occasion why a person should send a culture of that description and ask any man to examine it, and, much less, be able to make an immediate report, or in many instances a correct report.

The experiences derived from the State Orphans' Home in regard to diphtheria are corroborated by those of other institutions throughout the United States, in which the same method of eliminating patients coming in with latent diphtheria bacilli in the throat has been practiced. It is in vogue in one of the hospitals near Johns Hopkins' Hospital in Baltimore. They have had no trouble there from diphtheria. In those institutions in which it is not used the average number of diphtheria cases is constantly present.

In regard to the question of antitoxin, it is still strange to say that we find some physicians, even among our own ranks, who do not believe in antitoxin. They are absolutely hopeless. If they have not reached the state of adopting antitoxin by this time, they never will, and it is only a question of their natural longevity until that class of physicians are

eliminated. I think Dr. Mitchell's paper should have an opportunity of soaking into the minds of the average physician. When the State Board of Health offers every man an opportunity of having his suspicious throat cases reported upon, whether it is merely a mild case or whether it is associated with a membrane, and such is not taken advantage of by the physician, I think in many instances he is guilty of malpractice, particularly if that case should develop into diphtheria and prove fatal. There is no reason, with the facility that is given all physicians to have a correct diagnosis of their cases of sore throat made, why they should not accept it and make better use of it than they have in the past.

Dr. Hillkowitz: I was under the impression that in Germany, they were further advanced in hygiene with reference to taking cultures than any other country in the world. In reading a report by the bacteriologist in the city of Königsberg in Prussia, I was surprised to find from his remarks that they did not have the quick facilities for having cultures examined as we have here in Denver; that over there in the cities their physicians were not supplied so liberally with tubes and swabs for taking culture; a great many of them were, therefore, negligent in that respect; it was not handed up to them on a fork, as it is here in Denver; so that a physician is culpable of malpractice if he does not take advantage of the opportunities offered him by the Health Department.

Dr. Mitchell: It seems to me there is one very important point in reference to where there are several children who are exposed in the family. This state of affairs sometimes happens. The physician is called to see a child where there are several other children in the family and only the one sick, and the disease is diagnosed and proves to be diphtheria, and he gives immunizing doses to the children. Those children sometimes are later sent to school, and after the quarantine is released from the family. We know that the giving of antitoxin for immunizing does not prevent the bacilli from getting in the throats of healthy people, so it has frequently happened that the children who were given the immunizing doses have developed diphtheria, and those children have been turned loose without a bacteriological diagnosis. It is particularly in those cases that the culture should be taken later to see that they are free from the disease.

With reference to Dr. Hillkowitz's remarks

as to the bacteriological diagnosis in Germany, I hardly like to say this, but I have made it my business in every city I have been in in Europe, and in every city in the United States to investigate this matter, and I do not believe there are better or more facilities placed at the disposal of the physicians, particularly in Denver or all through Colorado, than for the bacteriological diagnosis of diphtheria.

### THE ATTITUDE OF GENERAL PRACTITIONERS TO OBSTETRICS.

By E. E. EVANS, M. D., Fort Morgan, Colo.

In coming before you at this time I do not pretend to have anything new to present for your consideration, but there is *nothing* touching the welfare of humanity that is not of great importance to the profession. And it is worth while to reiterate old truths, and to urge the acceptance of new truths by any who are not following the rules evolved by the experience of the past few years.

That parturition is responsible for a large part of the suffering of woman-kind, I believe all will admit. That much of the suffering and disability following parturition is due to carelessness, indifference or ignorance, or an overweening confidence on the part of the practitioner in the ability of nature to perform her functions without assistance, I believe to be equally true. On the other hand, that much of the morbidity among women is the result of their own negligence, I suspect is also true. In the light of this condition of affairs, what should be the attitude of the general practitioner—he who sees nearly all these cases—toward obstetric work?

Some one has designated obstetrics as the specialty of the general practitioner. Another has said that all study surgery which few practice, while few study obstetrics which all practice. If this be true—and who can doubt it?—it behooves the profession to give the subject more



attention, both in student days and as practitioners of the healing art. A large proportion of this work will always probably be done by the general practitioner, therefore it is very important that the training while in school should be such as to fit him to deal *promptly* and *properly* with any condition with which he may meet in active practice.

As a correct diagnosis is usually the precursor of correct treatment, it is very essential that an early and correct diagnosis be made in each case. By this I mean, one should ascertain the relations that exist between the foetus and the maternal parts, together with the general condition of both mother and child. And should there be dystocia the accoucheur should be able to tell with a reasonable degree of certainty the cause of same. I am aware that this is often a difficult matter, yet it is the desideratum which all should seek. If there be complications of any kind, they should be considered in the most painstaking way before any course of action is determined upon. A case illustrating this point I saw with a confrere recently. The face presented (the occiput being posterior); from the right antero-lateral and left postero-lateral quadrant of the cervix hung two polypi about three inches long and an inch in diameter. We concluded that although they interfered with the progress of the case, they would not prevent it proceeding, so we simply neglected them and labor went on nicely.

Perhaps the two conditions calling for as prompt diagnosis as any, are placenta previa and ectopic pregnancy. The latter condition I have met but once, and that after the mother had carried the child thirty-three years after the time for delivery. This case I reported in *American Medicine* for April 11, 1903. Of placenta previa I have seen three cases, one of them being my first case after gradua-

tion. When I reached the patient, who was at full term, dilatation was almost complete, the head pressed down well against the placenta, which was of the marginal variety, preventing hemorrhage. My efforts were put forth to retain the placenta within the os. In this I failed, and a very strong contraction drove the head into the world, tearing away about one-third of the placenta which was pushed in advance. The next pain delivered both the child and the remainder of the placenta. There was no hemorrhage. The second case was discovered in the midst of an abortion at about the fourth month, which it doubtless caused. From menorrhagia, it was suspected, while ectopic gestation was also considered. With the os dilated it was easily made out. The third case I saw at the seventh month on account of hemorrhage. An effort was made to tide the case over to term, which I succeeded in doing, with the loss of considerable blood. When labor set in the head presented, but the pains were weak and ineffective, so that the head did not press against the placenta (also of the marginal type) to control hemorrhage. It being apparent that the birth would not be accomplished by natural means, a consultant was called in who administered chloroform, and the child was delivered by forceps. The application of the left blade was difficult because of the location of the placenta, and considerable bleeding was encountered. The fetal heart sounds were not to be heard just before resorting to forceps, and it is probable that the foetus died from compression of the cord.

A case illustrating the neglect on the part of mothers, was one where the mother had borne five children without anything unusual having been encountered, so that when she was seized in her sixth labor she did not have me sum-

moned for four or five hours. Upon arriving I found the shoulder presenting with the arm prolapsed. Of course a choice between version and caesarian section was all that was left. I chose the former in the interests of the mother. The child was badly asphyxiated, but was resuscitated after vigorous efforts. It survived about thirty-four hours, dying from aspiration pneumonia.

Touching the question of asepsis in obstetrics, how many take anything like as great precaution against infecting the parturient woman, as they do against the infection of ordinary wounds—even small wounds? It seems to me that as a whole, we need to pay more attention of the cleansing of our hands and the sterilization of any instruments we may feel called upon to use. The use of douches seems to be a mooted question. Personally, I make it a rule neither to douche before or after labor, unless there should be some definite indication, such, for example, as a rise in temperature. Possibly this would not be good counsel for our city brethren, but in the rural districts it works out very well.

As a means of avoiding infection, I would urge the wearing of a gown the same as used in surgical work. This will serve the two-fold purpose of avoiding infection to our patient by preventing the shaking of dust from our clothes, and will also protect the clothing of the obstetrician against soiling. If only the latter reason were considered (though it is far inferior to the former), it will still be strongly indicated.

While in attendance upon the meeting of this society two years ago, it developed in conversation with a group of five or six members, that all made use of the gown, and yet all stated the wearing of the gown in such cases was very rare. Who of you would think of doing a surgical operation without first donning a gown? Yet, in the parturient woman,

we have by the separation of the placenta, and very frequently by the occurrence of cervical and perineal tears and abrasions, a large area of raw surface where infection may easily be engrafted, and certainly no accoucheur can consider his work done unless he repairs any lacerations of the perineum at the time.

Along with asepsis, and constituting one factor in securing it, should be considered the refusal on the part of the practitioner to attend a labor case while in attendance upon those sick with contagious diseases. I am quite sure I have seen serious results follow the neglect of this precaution. Under such circumstances I have turned over several cases to my fellow practitioners, and have had others refer their cases to me. I believe that such a course, instead of injuring us in any way, will inure to our benefit in the confidence which it will give the people when they see a physician more desirous of protecting them against risk, than of securing a fee. Of course in sparsely settled sections, I can see that one would be justified in attending upon labor while attending a contagious disease, but in such a case, the greatest care as to cleansing should be exercised.

#### Discussion.

Dr. R. F. Graham: The doctor has very well brought out a number of points and has covered the ground very well in regard to care in labor. I think the profession is careless. I take the ground that ought to be taken in regard to care in preparation of one's self as to asepsis to prevent infection. You can boil your clothes, your patients' clothes, or you can boil your instruments, and boil everything except your patients and yourself, yet it has been proven in surgery that most cases of sepsis occur either from the patients themselves or from the surgeons themselves. The putting on of rubber gloves after preparation of the hands is proof in surgery that the danger is generally from the surgeon, and not from the patient. The patient is much safer himself than he is against the operator. That is quite true in obstetrics. For that reason, for a number of years I have attended my pa-

tients with rubber gloves, and I have felt the patient is safer.

The doctor did not go into anything in regard to operative procedures because of lack of time, I suppose, but I was in hopes that he would say something in regard to the use of forceps, whether forceps should be used or not, and whether he regards forceps as much safer in some cases. I myself believe that is one point in obstetrics about which the profession is not very careful. Twenty years ago I used forceps four or five times as often as I do now. No one has a right to use forceps unless indicated. If things are progressing naturally, we are liable to err on the side of commission rather than of omission. We have to be careful in the use of forceps to guard against lacerations of the cervix and perineum.

Dr. Will H. Swan: The question of the use of rubber gloves and clean gowns is of too great importance not to be emphasized in the strongest terms. When we consider the difficulty of thoroughly sterilizing the hands, and the admitted importance of it in practically all surgery, we must admit that it is certainly as necessary in obstetrics. There is very little expense attached to it, and personally I regard it as a matter of absolute necessity in attending any case of obstetrics to wear rubber gloves.

Dr. Kate Lindsay: I think what we need is not only an antiseptic, but an aseptic obstetrical conscience. I find all over the world that among general practitioners there is no system of aseptic preparation, either for the obstetric practitioner himself, or for the preparation of the patient. In surgery we have a surgical aseptic conscience, to the bar of which every licensed practitioner is more or less called to answer. If we would have the same in obstetric work, we should have the same system of preparation of patients, and, I am sure, we would see better results. Dr. Lee, in a recent paper, says that 7,000 women lose their lives at present every year from sepsis. I mean, of course, parturient women. One woman in every two hundred is infected, and this in greater part occurs in small villages in the country. So far as I have tried to find out the state of affairs in the country, there are very few, comparatively few, general practitioners who have any system whatever, or who think it necessary to practice any such thing as asepsis. They would think it necessary if they did a surgical operation. In fact, this summer I found a general practitioner condemning the

work of a regular midwife for not practicing asepsis when he did not follow it himself.

The method of hand disinfection and cleansing practiced by doctor and midwife was to wash the hands in the common dirty family wash basin, wipe on the community roller towel, unless some member of the household was thoughtful enough to provide another, make frequent digital explorations of the vagina and if dilatation permitted fearlessly invade the cervix. Under such a system of midwifery can it be expected that puerlaperal infection in private practice will diminish?

Dr. Charles E. Patee: This paper in regard to obstetrical work has been exceedingly interesting to me. I spent a number of years in active practice in the rural districts, where my obstetrical practice was commensurate with a large active practice, and I think the previous speaker made a very good point in saying or suggesting that some routine aseptic preparation should be followed. I think one can establish a simple routine in the preparation of these cases. The motto of our work should be to keep clean and do no harm. We certainly do not follow that unless we are clean. If we are not clean, we take a great chance in doing harm. As we should try to prevent contact with contagious diseases, so we should try to keep clean and not introduce infection in obstetrical cases. We should be as apprehensive about infecting an obstetrical case as we are that a child should be protected against a contagious disease, like small-pox.

There was one question that was not brought up which is as important as some of the others, namely, the care of the eyes in the new-born. Those who are acquainted with me know that I am not an oculist, so they may not think I look at it from that standpoint. But the large number of infected eyes I saw in the past year have certainly impressed me with this point of careful preparation to guard against infecting the new-born. Considering the simplicity with which the care of obstetrical cases can be acquired, I think it behooves us, as the reader of the paper has said, to practice more methodical preparation in these cases.

Dr. Joseph E. Peairs: I have enjoyed this paper very much, and agree with the author most heartily. It is very important that the general practitioner should not only believe in, but practice asepsis. He should be very careful as to his gowns and the thorough preparation of the patient. The average woman objects to the sterilization of the local parts,



unless she has had labor pains. Her natural modesty prevents the thorough preparation of the parts with which we must come in contact during a hard labor, but the necessity must be emphasized. I believe the success obtained in tropical countries in the dirtiest huts or cabins that it is possible for one to live in, is due to this one fact, that thorough preparation is not only emphasized, but carried out. If we thoroughly antisepticize the parts with which we must come in contact during labor, I am sure we will get good results. In a large number of cases in the tropics I have found that the thorough use of soap and water in cleansing the local parts has given good results. There is no person who has more resisting power than a woman. Nature is clean, and unless the obstetrician introduces infection into the vagina he will get good results. I would emphasize the point that practitioners are not careful enough with the local parts before labor begins.

Dr. P. J. Rothwell: After we have put on a clean gown and rubber gloves on the hands, have washed ourselves clean, still there is something more that needs to be done, and I think we should stop breathing. We should either stop breathing, or we ought to wear a muzzle, then we would have it about right. (Laughter.)

Dr. Evans (closing the discussion): I agree with the remarks that have been made by Dr. Graham, namely, with regard to lessening the frequency of the use of forceps wherever it is possible to do so. I see fewer cases in my practice now where it seems to me forceps are indicated than when I was young in the practice of medicine.

I believe the obstetrician ought to have a wonderful stock of patience, and nothing should interfere with his work; nothing should cause him to endeavor to hurry labor. He should not hurry simply to get to some other case, as I heard one physician talk about doing.

As to the use of rubber gloves, which was referred to by Dr. Swan and Dr. Graham, I have not made it a rule in practice to use them, but have used them a part of the time. It is certainly commendable to use them. I believe if we do not use them, we are not taking all the precautions that can be taken.

In regard to the care of the eyes of the new-born, referred to by Dr. Patee, I have not had much trouble in that line. If there is any irritation of the eye, I generally use a solution of argyrol.

## *THE PHYSICIAN IN THE PUBLIC SCHOOL.*

By MELVILLE BLACK, M. D., Denver, Colo.

Compulsory education meets with the approval of us all. It fails, however, to be productive of the greatest good unless certain safeguards pertaining to the public health operate with it.

The experienced educator is not qualified to go much beyond the confines of his own department. The experienced physician should occupy a conspicuous place in governing our school work. When I use the word governing, I do not mean that he shall hear recitations, but I do mean that he shall have a voice in the assignment of the work in individual cases. This means that he must be familiar with the physical condition of every pupil in the school. In order to do this he should be capable of making an intelligent examination of the of these organs and refractive errors of the eye are common causes of poor vision, nose, throat, eye and ear, since diseases

dent.

In this brief article it will be my pleasure to point out how the physician in the school can be of assistance in an advisory capacity to the teacher and the student.

It goes almost without saying that the physician's knowledge of the physical and mental development of the child should be superior to that of any teacher. His presence in the school should not tend to make the child more conscious of his physical state, because the tactful physician should be able to form his opinions and give his directions without exciting in the mind of the child any apprehensions with regard to his being normal or abnormal. To insure complete familiarity with the child would require his daily attendance at the school

and frequent mingling with the children in order to detect the presence of beginning pathological changes. He should have the power to dismiss the child from school, and pass upon the time for his return, and since this position is in the hands of the school board, there should be slight possibility of abusing such authority.

I shall not dwell upon the advantages of having a physician connected with the school, except to emphasize how he could be of great service in detecting early the presence of abnormal eye, ear, nose and throat conditions. Take the eye for example, the organ of special sense upon which the student is most dependent. Abnormalities here spoil the otherwise good student, and even affect his general nervous system. They distort his view of life and give him a false conception of things in general. Correct these abnormalities and you convert the laggard into an active competitor for honors in school. You convert the truant into a regular attendant. In short the advantages to be derived from the correction of ocular defects are so numerous and so far reaching that they cannot be over-estimated. On the other hand the possibility of their being unrecognized may result in such harm to the mental and physical development of the child that the gravity of these changes cannot be underestimated.

The physician should examine the eyes of every child in the school for errors of refraction, congenital anomalies and disease. He should point out to the teacher these defects, and ask her to call the attention of the parents to the physician's findings and recommendations. He should not cease to give these warnings until the parents have seen fit to heed them.

With regard to the ear. Many a child is considered by the teacher to be stupid, and is scolded for inattention and backwardness when an examination of the ears would reveal the cause—poor hearing. It may not be possible to improve the hearing, but it is possible to make the teacher more considerate. The physician should call attention to the great importance of having discharging ears treated, and if the discharge cannot be arrested by treatment, of having the child operated upon. Discharging ears can be cured, if not by one means, by another.

The physician should call the attention of the teacher to abnormal conditions of the nasal passages which interfere with free nasal breathing and continue to do so until the parents have the matter attended to. The same may be said of adenoids. Free nasal breathing is absolutely essential to quick, active brain work. No child who is a mouth breather can be as quick mentally as he would be if the obstructions to free nasal breathing were removed.

This medical examiner should be somewhat of an orthodontist and qualified to pass upon and recommend suitable correction of abnormal states of the teeth and mouth.

It is to the school children of the present that we must look for the management of the future. The better the material the greater the progress will we make. This is a fact of economic value to the state. Our criminal classes come largely from those who have been poorly equipped to face the struggles in life. If they are better equipped, and this must be done when they are young, just so much have you added to their ability to succeed. To be handicapped with a poor body, or poor vision, or poor hearing or a sluggish brain means that the normal child is far in the lead. Just so

it means that the normal man is far in the lead. Remove this handicap early in life before the child has become discouraged and you open up a new vista. Life is brighter, the world is better, progress is easier and that which would have been failure is converted into success.

One hour a day in the school by an intelligent physician would work wonders in bringing about the desired result. Can the state afford it? Yes! and save money in the next fifty years by doing it.

#### Discussion.

Dr. Davenport: In my opinion the time is not very far in the future when the legislators of the various states will enact laws pertaining to the control of children in the public school. Dr. Black, in his excellent paper, has well said, "can the state afford it." It cannot afford to do otherwise. All reforms along this line naturally come slowly. Vaccination against smallpox, quarantine and preventing the contagious diseases by the various methods that have been used and adopted by civilized communities, have met with the sanction and approval of intelligent people everywhere. Because of having been invited by the school board of Trinidad two years ago to speak upon the subject of the diseases of the eye, ear and nose, in the parent's meetings, which were held in that city every month, I took occasion to look up statistics of other states which had made systematic examinations of the eyes of school children. I was greatly surprised to find that in Philadelphia about eighty-three per cent of all the children examined had some defect of vision. I was no less surprised to find about the same condition existed in Trinidad. When you stop to consider that a large portion of these children are handicapped in their school work by reason of this defect of vision, I think it is high time that the medical profession took some steps to prevent this state of affairs. This state, and every other state for that matter, should make some kind of laws to regulate this condition. I think it would be a good plan for the society to pass a resolution that this state create an office of state public school medical examiner, or name it whatever you please. I should like to see the Colorado State Medical Society take some action in this matter.

Dr. Byles: I did not expect to take any part in this discussion, but I was very much

pleased with Dr. Black's paper, and the remarks of the gentleman succeeding him. I think there is no place where the physician can be of more service to the public than in taking an active part in seeing to the hygienic condition of the schools. Certainly the health of the school children is a matter of the greatest importance to the health commissioner, and I think that it is certainly a subject that has been very much neglected by this profession. The public and the school board cannot be expected to take the initiative in such steps. I believe a great deal of benefit could be derived by having a regular school inspector provided for each school or community; so much could be done by him. In the first place, it should be his duty to see that the school buildings were located in a proper place, in a healthy community or neighborhood. It would be his duty to see that the school buildings were properly arranged and kept in a hygienic condition. The ordinary architect does not appreciate, possibly, the conditions of light in a school room that would be beneficial to the student and least harmful to his eyes. The position of the blackboard, the proper heating, and, especially, the proper ventilating and amount of air space are not sufficiently recognized. The teachers do not understand this subject, and as they have charge of the school rooms, the students are required to sit in poorly ventilated rooms. Then such an officer could see that the subject of health, and hygienic sanitation were taught and taught properly to all the students. Certainly a knowledge of the laws of health and right living are matters of as much importance to the students, during the days of their education and their training for usefulness, as a knowledge of grammar, arithmetic or many of the other studies. It is certainly a very important matter for any student to know. Not only is it of use to themselves, but they carry the information home to their parents. Such an officer, if established, could see that the teachers were capable of teaching the subject of hygiene in an intelligent manner. In case teachers were not capable he could conduct a class or deliver a course of lectures to them, and see that they were capable of imparting this information. In addition, there is a great field which Dr. Black has alluded to; the care and examination of the eyes. There are many scholars who go through our schools laboring under the great are in more or less close touch with members of the board, and I believe that if the physicians appreciated the value of their services in the capacity recommended in my paper it



disadvantage of trying to study with defects of vision that could easily be corrected. The defects of hearing in scholars are very often the cause of their being considered poor students. Many a scholar is hampered in school work by diseases of the throat. In addition to this, if there was a system of school inspection, or regular visitation of the schools under this general superintendent, much good would come. The work might be divided among a great many physicians who could run into the school every day, or two or three times a week possibly, and recognize infectious diseases in the school at the earliest possible moment. I have no doubt that half of all cases of diphtheria are at least one day on the seats of the public schools before the disease is recognized. Scarlet fever, measles, whooping cough and all those diseases would be recognized earlier and taken out and away from the other students, the books burned and the school rooms properly disinfected. Aside from those ordinary infectious diseases, there are a great many others that ought to be eliminated from the schools—cases of epilepsy, cases of chorea, skin diseases, tuberculosis, sometimes among the children, and sometimes among the teachers. I think there are some teachers in our city, occupying the school room daily, that are suffering from tuberculosis. There is a great field of usefulness for such an officer, and I think it would be a blessing to the community if the medical profession would bring this matter so prominently before the authorities that they would recognize the demand and take immediate action.

Dr. Hickey: We ought to feel indebted to Dr. Black for the presentation of this paper, for anything which will increase attention to this important matter, for this reason, that none so well as the physician is in a position to appreciate the importance of these things. It is not sufficient for us to put physicians on the school boards. As members of these boards they have other work which is important. They have other duties to attend to, and while they are not of more importance in many instances than this one, yet altogether there is so much work which ought to be done we can scarcely expect that this matter will receive sufficient attention at their hands; but it is a matter of so much importance that I am sure it ought to receive attention from practicing physicians in the way of educating the public sentiment. Knowing as we do the importance of these things, we ought to use all means in our power to educate the

public at large, and especially to urge upon the members of our school boards the importance of this line of work. A little was attempted in this city a few years ago under a former health board, when a physician in each school district or in the district belonging to each school house, was asked to give volunteer service in the way of such attention as seemed to be needed, visiting the school from time to time, the frequency of the visits being left to the discretion of the particular physician. In some cases I think this was carried out with very good results. In other cases the matter went by default, as no attention whatever was given to it on the part of the physician; but I think that the matter might be arranged even by means of volunteer service in a way that would not make it burdensome upon the physician, simply by having him visit the school occasionally, with such frequency as I am sure any physician ought to feel entirely willing to do in the interest of the public, and then having the matter so arranged that if any cases presented themselves to the attention of the teachers, they might be in communication with the physician so that he might then be called and give his attention to such cases, and I think even by such volunteer means a considerable degree of good might result. That this work should be superintended by a physician is evidenced by a few things that came under my observation at the time that service was rendered. For instance, I found that the examination of the eyes was being made in a gross way by the principal of the school. Such work can only be conducted by one who has had special training. Often pupils go along with the fond belief that their eyes are normal when they are far from normal. Then I found that some of the fumigation was being carried on without any particular attention being paid to the amount of fumigating agent which was being used, and I found that only sufficient was being used to make a very vicious odor, but not enough to do any good, and this not under the direction of a physician.

Dr. Black, closing the discussion: The time probably is not ripe for state control of this matter, and it seems to me the only way that we as physicians might be capable of bringing this about would be in approaching the school boards. In our smaller towns particularly I find that physicians are very frequently on these school boards, and, if not, are in more or less close touch with the members of the board, and I believe that if the phy-

sicians appreciated the value of their services in the capacity recommended in my paper it would be a comparatively easy matter to bring about this inspection. The great trouble lies in getting men in these different towns who are really personally interested in this subject to a point of being willing to sacrifice a certain amount of their time for this purpose in a gratuitous manner. As a matter of fact, I do not think it is necessary that we should do this service gratuitously. It may be necessary to do it for a time. Once the community realizes its importance, once the school board realizes its importance, I think then it might be brought about that this man could be paid a reasonable salary. It would not be a great burden, the salary of this one man, and it need not be a large salary, and I believe if physicians will take this matter up with their individual school boards and give their attention to this matter at frequent intervals, something may be done. I do not believe the occasional visits will be productive of the good that the intimate association of the physician with the school would be.

*The fixation of blood specimens in acetone* before staining with Ehrlich's triacid stain is recommended by Jagic (*Wein. Klin. Wochenschr.*) because of the quickness, simplicity and reliability of the method. By this procedure the neutrophilic granules are exceedingly distinctly stained as well as the acidophilic also. Moreover, the nuclei seem to take up more of the basic stain; they are darker colored and their contour is sharper than after the fixation by heat.—*New York State Journ. Med.*, April, 1907.

#### IT'S DIFFERENT IN GERMANY.

It is reported that at Magdeburg, Germany, a midwife was fined \$75 by the local court for asserting that a certain physician undertook obstetric maneuvers without disinfecting his hands sufficiently. Would such a judgment be rendered in our country?

Judging from the physician's position as seen from the jurist and public and evidenced by many precedents, we might expect the reverse with the approbation of the press and public.

## Progress of Medicine

### INTERNAL MEDICINE.

EDITED BY

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### CONGENITAL OBLITERATION OF THE BILE DUCTS WITH FIBROSIS OF THE PANCREAS AND SPLEEN.

Emanuel (*Brit. Med. Jour.*, Aug. 17, '07) reports a case which he considers presents a strong argument in favor of biliary cirrhosis being the cause of obliteration of the bile ducts and not the reverse as has been claimed.

In this case the mother was of doubtful heritage, and had a miscarriage, a still born and three other children that lived only a short time, although there were three healthy children.

The child became jaundiced when four days old and continued so until her death at four months.

The bile ducts were found to be entirely absent, the gall bladder rudimentary, and the liver in a typical state of biliary cirrhosis; but the pancreas and spleen were also found to be in a state of cirrhosis, but not to such an extent as was the liver. This he accounts for by supposing that the poison possibly syphilitic which reached the child from the mother would have to pass first, principally, through the liver, while the other organs would only get their share of it as it returned to them through the arterial system.

O. M. G.

### HEART CLOT IN PNEUMONIA.

Beverly Robinson (*Amer. Jour. Med. Sci.*, Sept., '07) reiterates his belief that cardiac thrombosis is a frequent cause of death in pneumonia and brings forward some clinical and pathological evidence to support his view.

He thinks that ammonium carbonate given from the start will generally prevent it, and that when the conditions are becoming favorable for its occurrence, i. e., evidence of failing right heart, venesection followed by saline transfusion will often avert it. Clinically I should think it would be impossible to distinguish it from dilated right heart. O. M. G.

#### CHRONIC INTERNAL AUTO-INTOXICATION.

Forchheimer (*Amer. Jour. Med. Sci.*, July, '07) gives a resume of seventy-seven cases in which he has considered this diagnosis justifiable. He defines it as that condition in which toxins formed in the intestines are absorbed by the organism in which they are produced, but he admits that, strictly speaking, the term auto-intoxication should be reserved for the condition in which toxins are found by faulty metabolism. He says it is due principally, if not entirely, to intestinal changes in albumen and nuclein and in both instances pancreatic digestion is the principal cause. The substances formed are mainly phenol and indol, although some of the albumoses may be toxic. The uric acid formed, as a rule produces only local symptoms.

The putractive changes are ordinarily produced in the colon almost exclusively; after the absorption of these toxins, the majority are rendered inert by the action of the liver and lymphatic nodes, but some remain unchanged and produce symptoms.

Most all the tissues of the body, especially the liver, lungs, kidneys, muscles and blood, attempt to neutralize these toxins, and generally succeed, though they often suffer in the attempt.

All of the seventy-seven cases belonged to the well-fed classes. He goes into the symptoms with great detail, but the principal are the following: Of the gastrointestinal tract, Rigg's disease (pyorrhoea alveolaris) was the most con-

stant, being present in sixty-six cases; fifty-four had stomach symptoms; twenty-seven, dyspepsia; nineteen, hyperchlorhydria; four, other gastric neuroses, sensory or motor; seven, nausea or vomiting, and one had gastroptosis. Many of these conditions may be factors in producing the intestinal putridity. All but four had some disturbance of the bowels; constipation, diarrhoea, sometimes alternating, flatulence and colic, mucous enteritis or appendicitis. In nearly all the colon was more or less filled, even in spite of diarrhoea, and tended to refill in the same locality, showing a paresis of that part of the intestine. Indican was increased in the urine in all but four cases, mostly so in the constipated cases; as indicanuria goes hand in hand with phenoluria, no tests for the latter were made.

In many cases there was alternating polyuria and oliguria and the polyuria was always accompanied by increase of indican. Nearly half the women were afflicted with some form of menstrual disturbance; thirteen, dysmenorrhea; three, menorrhagia; two, insufficient and irregular menstruation. There was genuine migraine in six patients, and all had large amounts of indican. Thirty-one had headaches; eleven, neuralgias; two, neuritis; four, paresthesias; fourteen, nervous and restless; seven, irritable and excitable; seven, depressive symptoms; three phobias; eleven, insomnia; two, hypochondriasis; one, melancholia; four, hysteria, and eleven, vertigo.

In the majority some deviation from the normal was found in the cardiovascular apparatus, eighteen having arteriosclerosis. In fifty there were disturbances of joints or muscles, seven had skin manifestations such as urticaria, eczema or furunculosis.

It will be noticed that next to Rigg's disease, the nervous symptoms were most in evidence. He does not mention one



of the most trying symptoms, that of foul breath. Treatment is not mentioned.

O. M. G.

#### SLOW FEVER.

I think it is now pretty generally recognized that the more persistent and intelligent we become in our efforts at diagnosis and the greater our facilities for accurate work, the less often we have occasion to make a diagnosis of mountain fever, ephemeral fever, febricula, simple continued fever, typho-malarial fever, etc.

Dr. H. F. Harris (*Jour. A. M. A.*, Aug. 3, '07) has made a careful study of a series of forty-five cases of "slow" fever in southern Georgia. In 51 per cent he isolated the typhoid bacillus, in 20 per cent the para-typhoid bacillus, and in two, both. Stained preparations of the blood by Romanowski method was made in every instance, but in no case was the malarial parasite found. There were two deaths, but unfortunately no autopsies were obtainable. All but three of the patients were drinking water from questionable sources, and in all but one instance the houses were unscreened and swarming with flies and often mosquitoes. He thinks the majority of such cases are atypical typhoid, as malaria is generally soon eliminated from the diagnosis by large doses of quinine, but there are still some cases which are unexplainable.

O. M. G.

#### NERVOUS AND MENTAL DISEASES.

EDITED BY

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#### RECOMMENDATIONS CONCERNING IMPROVEMENT OF MEDICO-LEGAL METHODS.

Pearce Bailey (N. Y. Psychiatric Society, May, 1907) discusses some defects in our code of criminal procedure

judged by the standards of modern psychiatry. The fundamental error in procedure in criminal lunacy is the test of responsibility, i. e., the knowledge of right and wrong as to the act at the time of its commission. Should the letter of the law be strictly observed, no lunatic could escape full punishment for his offense under it, unless it could be shown that at the time of commission of the act, he suffered from distinct clouding of consciousness.

Under this law, nevertheless, many murderers have been acquitted by reason of insanity. A loop hole has been left in certain states by adding "uncontrollable impulse." Where this clause did not exist, the fate of the prisoner depended upon the construction which the jury saw fit to place on knowledge of right and wrong as mentioned in the law. This unsatisfactory test had been retained in law because no better substitute had as yet been offered. Another reason the law had stood was the fact that decision is always in the hands of laymen, to whom the science of psychiatry is unknown. Modern psychiatry demanded that this test be not replaced by another, but be abandoned altogether. No criminal procedure could be in harmony with modern views of mental disease as long as there was no middle course between responsibility and irresponsibility, and no means of judging between them except those furnished by the knowledge of right and wrong. The model plan for procedure in criminal cases would be the reference by the court of the question of lunacy to a committee of three, two members at least of which should be medical men. These men should have been certified as to their moral character and should have passed an examination as to their qualifications to pronounce on mental conditions. The com

mission thus appointed should determine the degree of responsibility, that is, they should determine the character of the mental disease, if any, from which the defendant was suffering, and report in accordance therewith that he was fully responsible, partially responsible or irresponsible. Partial responsibility in capital cases should be sufficient to remit the death sentence, but no one who had committed murder and who was acquitted on the ground of partial responsibility, should be restored to liberty under ten years. In other felonies, cases of partial responsibility, should have the shorter sentence optional with the judge. The report of the committee should be handed to the court and become part of the evidence and should be the only medical expert evidence.

In the course of the general discussion which followed, Adolph Meyer said that in practically all European countries, partial responsibility had been recognized in some form. There had been heretofore too much expression of mere opinion on the part of alienists. The relative looseness in the determination of facts and the too liberal acceptance of hypothetical questions on the part of physicians had led to the unfavorable impression existing today. Adequate observation of accused persons should be invited, if not enforced. Alienists should themselves establish the standard as to what facts are necessary to justify an opinion. The question of responsibility should be decided by the physician.

Wm. Hirsch, a member of the Thaw lunacy commission, with frank significance, stated that the society should direct its attention to our own profession and endeavor to raise the standard of expert testimony to such a point that dishonesty and incapacity would not be brought to bear in criminal procedures.

[The essence of the situation seems, therefore, to lie with two propositions: First, shall our laws recognize a partial responsibility in criminal cases? Second, shall the decision as to degree of responsibility in a given instance rest with physician or jury? With special reference to cases wherein great issues are involved, such as the infliction of capital punishment, the distribution of large sums of money, etc., it may be said that until mental experts in general, offer greater unanimity of opinion concerning mental and moral capacity of criminals alleged to be insane, the decision of responsibility should remain with the jury. That is, although we may know that improvement of the criminal code is in order, the law, nevertheless, should not be changed so far as concerns decision of criminal responsibility by mental experts, until the latter have better proven their ability to pronounce judgment without bias. Since this may be difficult where the expert acts, not only as such, but also as counselor, the law might well be amended so as to permit the appointment of expert commissions. The judgment of the latter would not be paramount, yet without doubt most juries, even today, would accept as evidence of great weight unanimous finding by a commission of alienists whose work would bear witness to conscientious study of presenting conditions in a given case.—DEPT. ED.]

#### OPHTHALMOLOGY.

EDITED BY  
E. W. Stevens, M. D.,  
Denver, Colorado.

#### INFECTIVE CYCLITIS IN RELATION TO PENETRATING WOUNDS OF THE EYEBALL.

Percy Dunn (*Brit. Med. Journ.*, July 27, '07, prefers the term Infective Cyclitis to that of Sympathetic Ophthalmia, which he considers out of date, inaccurate and impossible.

He believes that it is only by the open treatment of ciliary wounds that so-called sympathetic ophthalmia can be averted. For many years he has never sutured the sclerotic, or interfered surgically with the wound, even to the extent of replacing any portion of the ciliary body which might happen to have prolapsed. He believes that by closing the wound we invite disaster, on account of the risk of imprisoning micro-organisms. In other words, infective cyclitis is solely the result of the defective practice of the principles of antisepticism.

The traditional fear of ciliary wounds is, in Dunn's opinion, another old man of the sea. The question of the nature of the wound and its position, whether it is confined or not to the ciliary region, is entirely secondary as to whether the wound is or is not aseptic.

#### OCULAR SYMPTOMS IN CEREBRO-SPINAL MENINGITIS.

A. J. Ballantyne (*Brit. Med. Jour.*, July 27, '07) reports the results of his examination of the eyes of seventy-three cases of cerebro-spinal meningitis. Eye symptoms were absent only in four cases; of these two were convalescent.

*Eyelids:* An eruption of herpes on both lids of one eye occurred in an acute case at the end of the first week of illness.

In none of the cases was there drooping of one or both lids which could be described as ptosis.

Retraction of the eyelids was observed in fifteen cases. It was observed as early as the fourth day, but most of the cases in which this symptom was well marked were cases which had passed into the chronic stage. The patients in whom this symptom was observed in the early acute stage (four in number) all died in the acute stage.

In twelve patients retraction of the lids was associated with dilated pupils in which the light reflex was absent or very defective.

Retraction of the lids was seldom a constant symptom, and it nearly always disappeared when the patient was asleep.

Blepharospasm was very frequent. In the majority of cases the slightest touch upon the lids excited a strong lid spasm. Spasmodic resistance to separation of the lids was almost the rule, but the patients could often be induced to open the eyes spontaneously, after which even prolonged ophthalmoscopic examination was tolerated so long as the lids were not touched.

Hyperaemia of the bulbar and palpebral conjunctiva occurred in many cases, and catarrhal conjunctivitis with more or less purulent discharge was found in thirteen cases. Conjunctival hemorrhage was observed in four cases.

*Cornea:* The corneal reflex was tested for in twenty-five cases. It was absent in one, in which the other eye reflexes were also absent or very deficient. In two other cases the corneal reflexes were present, but very deficient. Death occurred in these three cases.

*Uveal Tract:* No evidence of iritis, cyclitis or choroiditis was found in any of the cases.

*Pupils:* Only six out of sixty-nine cases in which the pupils were examined had no pupillary abnormality.

Inequality of the pupils was noted eighteen times. In the great majority of cases where the pupils were unequal the pupil reflexes were deficient. The size of the pupils was measured in sixty-nine cases. Taking 3 to 5 mm. as the normal limits, dilated pupils were found in thirty-four, contracted in five and normal in twenty-six cases. When the pu-



pils were dilated they usually had the character of an irritation mydriasis.

The light reflex was normal, or nearly so, in twenty-four cases, deficient in twenty-six, absent in seven and variable in activity in eleven cases.

Contraction of the pupil in near vision was good in twenty-one, deficient in fifteen, absent in seven, and variable in two cases.

In general terms, none of the pupil phenomena, with the exception of total absence of the reflexes, seemed to be of any value as regards diagnosis or prognosis.

Strabismus was observed in fifteen cases, and in but one case was there evidence that the squint was paralytic.

*Ophthalmoscopic Changes:* Double optic neuritis was found in five cases.

The most striking feature of these cases is the great variation in the symptoms—retraction of the lids, squint, size and reactions of the pupils, etc., in the same patient from day to day.

#### EAR, NOSE AND THROAT.

EDITED BY

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C. E. Cooper, M. D.,

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#### REMARKS ON ENDONASAL SURGERY.

A. B. Thrasher, (*Ohio. State Med. Journ.*, July, '07), after paying a tribute to modern surgery in its legitimate application and regretting its use in ill advised cases, which he attributes to the brilliancy of its cures, and its contrast to the more slow process of drug therapy, as well as its shekel gaining ability, launches into the subject of turbinectomy; the inferior turbinate receiving the most consideration.

He says: "The results of bad surgery in this region are so serious that the limits for this work should be more clearly

defined and the evils arising from turbinectomies should be better known."

The elemental function of the nose, is a respiratory one and not, as is frequently supposed, an olfactory one. Though at one time it may have been decidedly olfactory, at present its utility in this respect is growing less and less and that of respiration more and more, important. This is especially true in view of the modern method of living in ill ventilated, improperly heated, houses, which require a greater filtration as well as moistening of the inspired air, most of which the inferior turbinate is called upon to perform.

Throat and nose conditions immediately increase with the onset of cold weather, not because of the lowered temperature, but because of poor air from the closing of doors and windows and the starting of fires and furnaces. Tersely put, he says: "The fear of draughts is fraught with more serious consequences than the exposure to draughts." Such conditions of modern existence materially increase the importance of the respiratory function of the nose.

Removal of the inferior turbinate is never justifiable except as a last resort. The train of consequences following removal of this protecting member is sinusitis of any or all sinuses, pharyngitis, eustachian salpingitis and a number of variously manifested lung lesions from the simple dry cough to tuberculosis.

Partial turbinectomies are frequently demanded, but as much of the function of the turbinate as possible should be preserved. It is astonishing how few cases require surgical interference, and he advocates a submucous cauterization or bistoury puncture.

When nasal obstructions exist springing from the septum they can be removed without subsequent injury because septal

structures are not air filters. As little scar tissue as possible should be left.

The middle turbinate, fortunately, has not the important function to perform, in the same degree, as the inferior and operative measures upon it are less liable to be followed by serious consequences. A removal of a part may often be done with decided advantage.

Results accruing late after removal of the inferior turbinate are apparently atrophic rhinitis, but in reality more serious; for the protection of the middle meatus being taken away, micro-organisms of all kinds find easy entrance into the accessory sinuses.

That there is a conservative movement on foot in nasal surgery is quite fortunate. No longer is the Ash operation done for slight septal deflections, but a submucous resection. External disfiguring operations on the sinuses are giving way to intranasal ones. Posterior hypertrophies are not so frequently removed because we have learned that much of the discharge formerly attributed to them is due, as they themselves often are, to sinus disease.

Summary: "The nose must be kept or made patulous; the openings into the various accessory cavities must be unobstructed. Offending tissues, diseased beyond repair, whose physiological functions are permanently destroyed, should be surgically removed. But nothing should be done that impairs the normal functions of the nose and above all the lower turbinate, which stands as a protecting sentinel at the gateway of the lungs, must not be sacrificed except as an urgent necessity.

#### EXAMINATION OF SCHOOL CHILDREN.

C. L. Minor (*Ohio State Med. Jour.*, July, '07) gives the following statistics:  
Number examined, 2,536.

Number of defective individuals, 1,036.  
40 4/5 per cent.

Percentage of defective tonsils, 12 1/3.

Percentage of adenoids, 5 1/6.

"It will be noted that there has not been any report of nasal conditions. This is due to several reasons, chiefly, however, that almost all of the children showed some pathological condition of the nose, either a chronic catarrhal trouble in various stages, or an acute condition—the latter being epidemic at the time of the examination. Unusual cases, such as atrophic rhinitis, occlusion of nares, especially of the middle turbinate, were noted on charts.

C. E. C.

#### OUR FAULTY METHODS OF BRAIN LOCALIZATION IN INTRACRANIAL LESIONS COMPLICATING AURAL DISEASES.

S. MacCuen Smith, M. D. (*Annals of Otol., Rhin. and Laryng.*, March, '07) aims to establish some points in the differential diagnosis of brain lesions in aural diseases. Emphasis is placed on the importance of prompt action in intracranial suppuration in order to save life.

First decide if abscess is present, and second its location.

An analysis of the symptoms usually determines if abscess is present, but its location is more difficult. Prof. Keen has pointed out that "fifteen years of experimentation—vivisection—has taught us more than the previous fifteen hundred years of careful observation and post mortem examinations." The valuable information obtained by vivisections, if properly utilized, will be the means of saving of hundreds of valuable human lives that today are being sacrificed unnecessarily.

"In uncomplicated cases our methods of localization are fairly accurate and can be relied upon in the majority of instances." The difficulty of localization in complicated cases—and they are the more common—is very great, often little more than guess work. Pressure symptoms, as headache, nausea and vomiting, vertigo toward the diseased side,

general depression, lethargy, convulsions, choked disc, slow pulse and low temperature are well recognized as indicative of intracranial lesion. Bruhl states that in a lesion of the third frontal convolution on the left side, we find agraphia and alexia; and in the first temporal convolution on the left side, word deafness, crossed deafness and anosmia; of the occipital lobe, visual aphasia and hemipia. If around the fissure of Rolando, epileptiform convulsions and paralysis of the extremities and the face of the opposite side are present. If the cerebellum, ataxia, vertigo, staggering gait, nystagmus, emaciation and rigidity of neck muscles are in evidence. The first symptom of brain abscess is severe pain that later becomes steady dull ache. It is increased by percussion or pressure on the head. Temperature is at first high, but soon drops to normal or subnormal. The pulse is at first rapid, slows down until pressure is relieved by rupture of the abscess, when it again becomes rapid. Respirations are slow, deep and stertorous. Reflex vomiting with clean tongue. Early there is photophobia, and later dilated pupils from pressure on the affected side. Optic neuritis may be present. Patient lapses into stupor and attention hard to obtain. Most of the brain abscesses of otitic origin develop in the "dangerous area," one and a quarter inches above and behind the external auditory canal. After evacuation, small satellite abscesses may form near the original abscess and cause fatal termination if overlooked. Sensory aphasia indicates lesion in the temporo-sphenoidal convolution; motor aphasia when in the third frontal convolution, or when from pressure, as from an adjoining temporo-sphenoidal abscess. Hemiplegia is indicative of pressure on the internal capsule. Implication of the third nerve, and sometimes of the sixth, is a symptom of temporo-sphenoidal abscess.

The significance of blood counts is given to determine the presence of pus and gangrene. The average of the polynuclear leucocyte count is given as 61 per cent. A relative count of less than 70 per cent would exclude pus. It is uncommon to find pus under 80 per cent, 93 per cent is indicative of a very severe process and 95 per cent is almost fatal.

Two cases are cited. One with a polynuclear count of only 59 per cent that recovered without operation. The second case, a young man recovering from mastoid operation that followed acute otitis media, developed meningitis and showed a polynuclear count of 83 per cent. Operation revealed a large abscess. Death occurred from meningitis.

BANE.

### Communications

To the Editor, Colorado Medicine:

Here are extracts from two current advertisements. Number one is taken from a daily newspaper, one of the "yellow journals," run to make money. It is the attempt of counter-prescribing druggists to steer the dollar of the ignorant and foolish in their direction. Number two is taken from an "independent" medical journal, published in Denver. It is after the same dollars; but it seeks to get them by using the medical profession as a catspaw. Here they are.

No. 1. "If it is your desire to keep what hair you have, or if you want to restore them to their natural color, you easily, certainly, and surely can do so by using ————'s Oriental Hair Renewer."

No. 2, headed CANCER, reads: "We will send an ounce jar of ———— to any physician by mail upon receipt of \$1. This quantity is usually sufficient to cure ten ordinary cases of skin cancer."

We often hear complaints of the subservience of the newspapers, to the interests of the quacks and the patent medicine proprietors. Why should not men of ordinary business honesty and commercial ideals print advertisements like number one, if it pays; when doctors in good standing in their profession lend their names month after month to give currency and respectability to number two? The medical journal in question prints each month a long list of names of the members of the Medical



Society of the City and County of Denver as its editors.

Then there is another "independent" medical journal, published in Denver, which prints as its editorial staff the names of members of almost every county medical society in the state. This journal, like the one above mentioned, advertises proprietary medicines, rejected as unethical, by the Council of Pharmacy of the American Medical Association, including some that advertise directly to the public through the "yellow" newspaper. Of these latter, one during the last epidemic of yellow fever, advertised thus in a New Orleans newspaper: "H——— is a positive preventive of yellow fever. A scientific, absolutely harmless germicide, universally endorsed and successfully used by the best physicians. You can absolutely safeguard yourself against the fever by taking a teaspoonful of H——— in each tumbler of water you drink."

If the medical profession is to exert any influence for the suppression of counter-prescribing, and the grosser forms of quackery, it must place the advertising pages of its medical journals on a different plane from those of the "yellow" newspaper. The need to do this is one of the reasons for the establishment and conduct of medical journals by State Medical Societies. The journals that live by unethical advertising strive most strenuously to belittle and begot the issue; but they can no longer wholly ignore it.

I do not urge a boycott of medical journals conducted on a purely commercial basis. But it seems poor taste and poor judgment for a physician to permit the table of his waiting-room to be littered with free sample copies of these advertising sheets, where the patient may see the same unblushing, preposterous claims urged upon the doctor, that he encounters in the quack columns of the daily press. Such a patient might very well lose confidence in one who associates, even thus passively, with such representatives of the "Great American Fraud." We are justified in sharp criticism of the daily newspapers, the religious periodicals, and the popular magazines, as most of them are now conducted, for their willingness to assist quackery; but not until we have struck nearer home, and effectually purged the literary profession and medical science.

EDWARD JACKSON.

To the Editor of Colorado Medicine:

In a catalogue recently issued by the Westminster University College of Medicine, my name appears as Professor of Anatomy. I am not connected with the above school in any

way, and I will consider it a favor if you will so state in your next issue, also publish the enclosed copy of a letter, which explains itself. I ask this because the catalogues have been mailed to many members of the medical profession. Very truly,

CUTHBERT POWELL.

September 2, 1907.

To the Editor of Colorado Medicine:

The use of my name in connection with the faculty of the Westminster University College of Medicine was not authorized by me.

The enclosed letter, written on receipt of catalogue, explains itself. Yours respectfully,  
R. G. MORRISON.

## New Members

N. Eugenia Barney, L. E. Storton, Sterling; J. H. Daniels, Merino; Edwin Lewis, Sedgwick; W. E. Thompson, Greeley; Francis A. Sutorius, Florence; Hart Goodloe, Canon City; J. W. Kaylor, Akron; R. W. Fraser, Central City; C. W. Bixter, Erie; R. Henderson, Jr., Louisville; George H. Curfman, Salida; J. W. Sickenberger, Ouray; G. N. Towers, Ridgway; B. F. Cummings, Lake City; N. H. Chapman, Monte Vista; W. G. Lockett, Fruita; L. A. Bradburn, Center; E. Gray, F. D. Coltrim, Grand Junction; A. J. O. Lof, Aspen; Granville Hopkins, J. J. Rosenberg, Glenwood Springs; L. McD. Burgess, Delta; L. T. Boland, Cedaredge; H. K. Porter, Delta.

## Deaths

Dr. M. Beshoar, of Trinidad, is dead. He was a thoroughly known and esteemed practitioner in his town, where he had resided since 1867. He was 74 years of age, a veteran of the Confederate and Union armies, and the oldest living graduate of the University of Michigan. He was identified by his statesmanship and philanthropy. Southern Colorado, if not the entire state, will feel the loss of this distinguished pioneer physician.

## Items

The new Dispensary building of the Denver and Gross College of Medicine has been completed and was opened without ostentation. It is no exaggeration to say that, save few of the heavily endowed University Free Clinic Dispensaries, it is the finest in the United States.

The State Hospital at Pueblo is to be enlarged to accommodate more women, if the press reports are true. Plans are completed and work will begin in a few weeks. Nothing has been so much in need as this addition, and it is important that it be completed as soon as possible.

The report of the **State Board of Health** for July shows that there were reported during the month seventy-nine cases of diphtheria, 222 of scarlet fever, sixty-five of small-pox and 274 of typhoid fever. The total number of deaths in the state during July was 942. The Board also announces that the Food Division of the Department has been placed in charge of Dr. E. C. Hill. The food law becomes effective January, 1908. Analyses of water, milk and food stuffs of questionable purity will be made at the request of local health boards or health officers without charge.

### Books Received

[All books received will be acknowledged in this column to be recognized by the contributor as the equivalent. Reviews will be made of these volumes according to merit and the interests of our readers.]

**Physiology of Alimentation.** By Dr. Martin H. Fischer, Professor of Pathology in the Oakland College of Medicine. 12 mo, pp. 348. 30 figures. Cloth, \$2.00 net. New York: John Wiley & Sons, 1907.

**Manual of the Diseases of the Eye.** For Students and General Practitioners. By Charles H. May, M. D., Chief of Clinic and Instructor in Ophthalmology, College of Physicians and Surgeons, Medical Department, Columbus University, New York, 1890-1903; Ophthalmic Surgeon to the City Hospitals, Randall's Island, New York, etc., etc. Fifth Edition, Revised, with 362 Original Illustrations, including 22 plates, with 62 colored figures. 12 mo. Cloth, pp. 391. Price, \$2.00 net. New York: William Wood & Company, 1907.

### Books Reviewed

**Physical Diagnosis, With Case Examples of Inductive Method.** By Howard S. Anders, A. M., M. D., Professor of Physical Diagnosis, Medico-Chirurgical College, Philadelphia; Physician to the Philadelphia General Hospital, Tuberculosis Department, etc., etc. With 88 illustrations in the text and 32 plates. Cloth, pp. 456. Price, \$3.00 net. New York and London: D. Appleton and Company, 1907.

This book is well adapted to the purpose for which it is written, namely, to counteract the existing tendency to hasty superficial physical examination; to inculcate the inductive habit of thinking, after the "synthetic induction" plan exemplified by Dr. Conan Doyle's detective, Sherlock Holmes.

Following an introductory chapter, Part I

deals with The Chest, Methods and Technic; Physical Signs and Diagnosis in General; Part II with the Abdomen and its principal organs; and Part III with the Roentgen Ray in Medical Diagnosis.

A feature of the work is the citation of records and hypothetical cases exemplifying the inductive methods of reasoning in arriving at a diagnosis. The book should prove of undoubted value to students as well as to the general practitioner.

**Physician's Manual of the Pharmacopeia and the National Formulary.** An epitome of all the articles contained in the U. S. P. and the National Formulary. By C. S. N. Hallberg, Ph. G., M. D., Professor of Pharmacy, School of Pharmacy, University of Illinois, and J. H. Salisbury, A. M., M. D. Pp. 198. Price, 50 cents. American Medical Association, 1907.

This multum in parvo work at first sight suggests that it is the right thing, and now it remains to see that it reaches the right place, and that is in the hands of the medical prescribers who are ignorant of the value of the preparations in the Pharmacopeia and National Formulary and who use many proprietary medicines which are to be found in these works.

The book is of convenient size for the pocket or desk, and is splendidly arranged for rapid reference. The introductory remarks include a brief statement of facts regarding the pharmacopeia and National Formulary, and the reasons for the publication of the Manual. The list of articles is alphabetically arranged and under each is given the synonym, source, description, uses, dose, and the best means of administration.

In many instances prescriptions are given in the apothecaries' and the metric systems. Incompatibilities are briefly mentioned.

Following the list is a therapeutic index which should prove of inestimable value. In this we find but one small objection on account of its being misleading. Under paralysis we find "A prescription for paralysis, 146," where a formula for triturates of strychnia, 1-25 grain is mentioned, which should be a contraindication early in cerebral paralysis, and we believe as such it would have been better omitted.

An index of synonyms concludes the Manual and will enable the physician to refer to the official title of a preparation when only the local common name can be recalled.

The book is without doubt the most complete and concise reference yet published for the purpose for which it is intended and at a cost far beneath its worth.

# COLORADO MEDICINE

PUBLISHED MONTHLY BY THE COLORADO STATE MEDICAL SOCIETY.

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Annual Subscription, \$2.00.

Single Copies, 20 cents.

All communications to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are typewritten.

Communications and items of interest are invited from all parts of the state. Death notices, removals, changes of address, etc., are especially desired.

Secretaries of the County Societies are earnestly requested to report their meetings, including the subject matter of the papers presented, and in general, the substance of the discussions.

Marked copies of local newspapers, or clippings, containing matters of interest to the profession will be gratefully acknowledged. The name of the sender should be given.

The journal will be issued on the 15th of each month. All copy must reach the editor not later than the first of the month. Advertisements of proprietary medicines will be accepted provided the preparations advertised have been approved by the Council of Pharmacy and Chemistry of the American Medical Association. Address all communications regarding advertising to

JAMES M. BLAINE, M. D., *Adv. Mgr.*, 3-4 Steele Block, Denver, Colo.

## IMPORTANT NOTICE.

All members of the Colorado State Medical Society are entitled to a copy of this journal each month. Failure to receive the same, and change of address, should be promptly communicated to the editor.

VOL. IV.

DENVER, OCTOBER, 1907.

No. 10.

## Leading Article

### CATHARTICS.

When the anthropic brain developed to the extent of dominating the body requirements, and thorough procrastination still the calls of nature in the matter of bowel evacuation, remedies which enforce the reflex to a point of imperative obedience became a necessity.

With the mental advancement of the race the demand for such substances has relatively increased. Not only has the nervous system become accustomed to the normal reflex and learned to ignore it, but it has in many individuals acquired an immunity to the ordinary laxatives. The habit born of instinct has given way to psychic control.

Cathartics, and particularly the vegetable ones, are taken in increasing doses, as a rule, to obtain "the desired effect," and despite this fact, the public have been taught to recognize the "vegetable" cathartics, or the words "purely vegeta-

ble" as essential to the best for their requirements. A moment's reflection will suffice to show that no mineral cathartic will admit of the multiplication of its dose as do the vegetable ones, such as podophyllum, senna, colocynth, cascara sagrada and a host of others. The importance of this fact becomes at once obvious.

It is doubtful if any one class of remedies has ever been in such universal demand and certainly few have done so much harm.

Among the remedies in common use will be found those which are decided irritants to the intestinal tract and whose effect is attributable in a large measure to this fact. The chronological order of events in the case of one of the most popular cathartics is at least interesting when associated with the occurrence and rapid increase of certain derangements of the gastro-intestinal tract.

It was about a quarter of a century ago when cascara sagrada was first introduced and in a remarkably short space



of time its use and effect became common knowledge, even to the layman.

In 1887, a fluid extract was extensively marketed and which still bears the distinctive title, "1887 fluid extract." The early '90s saw the rapidly increasing demand for "25 cents' worth of cascara" in the drug stores. Enterprising concerns began the exploitation of so-called syrups of fruits—the names of fruits of known laxative value being chosen—and the fruits themselves appeared "in name only;" the properties of most of these were due to cascara. Many tablets and "vegetable" pills contained concentrations, under coined names suggestive of the active principle, until nearly all the preparations at the present time intended for laxative purposes, consist wholly or in part of cascara.

Associate then the following questions with the foregoing facts. Has any decade on record made the showing in intestinal colonic disorders as did the last of the nineteenth century? May we, incidentally, so account for the sudden increase in the occurrence of appendicitis? Was the grape seed, in truth, cascara sagrada? Was the demand for intestinal antiseptics, during this period,precedented?

The cascara habit has become truly a pernicious one, and, the medical profession has been largely responsible for the acquaintance of the lay public with the remedy. The happy effect of the first ten to fifteen drops is well known, but the harm lies in the necessity of increasing the dose. Those who have met the demand in this manner have eventually suffered from the irritant effects upon the colonic mucous membrane—painful accumulations of gas, boli of fecal matter and their effects are quite common. A saline purge, in these cases who have depended upon cascara, will invariably cause the appearance of large casts of

the mucous membrane in the discharges that follow more constantly than with the use of other vegetable evacuants, in testimony of its decided irritant action.

Why are "vegetable cathartics" so thoroughly advocated by the proprietary medicine manufacturers? Is it on account of their permanent or sustained effect? Would it be as profitable to "push" a remedy whose effect did not require that it be repeated in increasing dose?

Unfortunately, in this as in so many other instances, we have been led to discard medicines of superior merit, upon the extravagant statements of the virtue, and clinical records of their successful administration, which could not be verified in our hands.

"Husband's Magnesia," for example, was, in certain localities, a most valued remedy, when through advertising it sold at 40 cents per half ounce bottle; when, however, it became official as *Magnesii Oxidi Ponderosum* it became displaced by something more "modern," and yet, in doses of from one to two teaspoonfuls in sweetened water or milk, it is both palatable and effective; and the action is more sustained than any of the vegetable laxatives.

Another salt of magnesia, which has as its main objection, the unpalatability, is the sulphate or Epsom salt. This is well overcome, however, by administering it dry upon the tongue, in which case one-fourth the dose is required; i. e., instead of a tablespoonful, one teaspoonful will, if placed dry upon the tongue and washed down with a swallow or two of cold water, be even more effectual and prompt, more sustained in action and devoid of taste—magnesium sulphate is but slowly soluble in water and substances undissolved are not perceived by taste.

The *Liquor Sodii Phosphas Compositus* occupied an important place when a

cholagogue effect is desired; the nitrate of sodium contained, promotes diuresis and to some extent, aids in lowering arterial tension.

When obstipation has been overcome by the use of such remedies with the association of an inaugurated habit, they may, contrary to the possibility in the case of vegetable laxatives, be diminished and finally replaced, first, by cod liver or olive oil and later by English walnuts, in association with a regulated diet, to the end that the supposed necessity of constantly "taking something" has been removed, and the rest remains with the individual; a recurrence to be determined by the repetition of the cause—procrastination.

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## Editorial Comment

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### THE ANNUAL STATE CONVENTION.

The Glenwood Springs meeting of 1907, and the first meeting held on the Pacific Slope in the history of the society, is now a past event, the record of which will show one of the most successful and enjoyable meetings yet held by the Colorado State Medical Society.

That Glenwood Springs is a place *par excellence* for the annual meeting was evident in the favorable comment heard during the session. The possibility of attending the General or Section meetings without the constant call of the members from an audience, so common and annoying in the large cities, was conspicuous by its absence.

The special train under the supervision of Mr. Lee Haney, after being held for the northern delegation, left Denver about 10:30 a. m., with about ninety-five members aboard. They were joined by thirty at Colorado Springs.

After an enjoyable day, Glenwood was reached about midnight. There were in all about 175 in attendance.

In the General Session, all but three of the representatives appeared and read papers, while, from the reports of the sections, all the papers on the program were read and well discussed. We believe that those members who were chosen by their society to represent them on the program and failed to appear, owe an apology to their county society, the state society and its officers.

The House of Delegates met each morning at 8:30, and by expeditious work, the General Session was held promptly at 10 a. m.

The guests of honor of the session, Drs. Charles H. Mayo and L. B. Wilson, presented the subject of Exophthalmic Goitre in a most interesting manner, the many photographs which were shown were an indication not only of the care in recording their cases, but an index of the enormous amount of material upon which their deductions were based.

The entertainment features were many, natural and pre-arranged; of the latter, the most enjoyable was the trip to Shoshone, by special excursion, where, through the courtesy of the Central Colorado Power Company, and kindness of their superintendent, Mr. J. F. Klaner, a splendid luncheon was served, after which the party was driven about, and the immense workings of the company were shown and explained.

While the session was everything that could be desired socially, the annual banquet was missed by the majority present.

The courtesies of the Hotel Colorado Company and the Glenwood Hot Springs Company and the Fairy Caves Company were taken advantage of by nearly all and thoroughly appreciated.

After all it was a decided improvement in every way over previous years, consequently the superlative in the history of the society.

Our regrets are to those who were absent.

[Note.—The abstract of the Proceedings of the House of Delegates will appear in the November issue.—Editor.]

### HIGH POTENCY GALL.

That cool imprudence which is implied by usage to the word "Gall" and the over-assurance and audacity conveyed by the word "Nerve" are far too inadequate to describe the front of brass which was required to send to the physicians of our city and state, through the mails, advertising in the form of a yellow circular, "A Life Saver;" "Dunn's Uterine Evacuant," "The Ideal Uterine Cleaner." The circular proceeds to inform the reader that the preparation is "A mild and absolutely harmless fluid Antiseptic that can be *injected within the Uterus* with perfect safety and with *immediate effect*." It is stated to be "Ideal for *emptying and cleaning* the uterus after *incomplete abortion*, miscarriage or the third stage of labor." (The italics are ours.)

The few lines which follow—"Having been used by the author with uniform and remarkable success, he now offers it to the profession"—become very interesting when associated with the add taken from the "Personals" in the *Denver Post*:

#### DR. DUNN

Specialist for women, regular physician; painless treatment; patients boarded; rates to suit. Office opposite state capitol, 1441 Broadway.

And this one from the *Denver Republican*:

#### DR. DUNN,

Specialist for women. Regular physician. Private sanitarium accommodations furnished when desired. Office 1441 Broadway.

Cases are cited to indicate the *remarkable efficacy*, and one statement to be found here is worthy of repetition: "Cleansed the vagina and cervix with 1 in 500 Hg. Bichloride solution, etc., etc.

An order blank accompanies the circular.

Strange as it may seem, this is the best part of the sheet, for as we see it, the worst is yet to come. Following the statement "If in doubt as to what *other physicians* think of Dr. Dunn's Uterine Evacuant, make inquiry of any of the following named physicians who have used and frequently ordered the "Evacuant" is a list of twenty-four physicians which includes five of our own membership.

If the names of F. M. Smith, M. D., Holyoke; Dr. B. F. Haskins, La Junta; Dr. D. S. Hoffman, Lake City; Dr. W. O. Patterson, Pueblo; and Dr. D. W. Clark, Del Norte, are used without their knowledge—and this is the only way we can account for the name of a self-respecting member of our society appearing in testimony of such quackery—we feel that it is but just that mention of the fact be made in this way, not only to inform them, but to give opportunity for a statement which will be eagerly looked for by our readers.

We have said enough of the act, and the only comment upon the author, Dr. Dunn, who is a graduate of Rush Medical College, 1885, we can make is to condole with the college and at the same time feel grateful that we are not forced to claim him.

[Since the above was written we are informed by the Secretary of the State Board of Medical Examiners that the license of Dr. Dunn has been revoked.]



## ON CHEAP PRACTICE BY CHEAPER PRACTITIONERS.

Hardly a day passes but we are apprised of some individual attempting to influence business in his direction by resorting to reprehensible methods. In modern commercial business these attempts are becoming so common as to occasion but little surprise, and are in fact, often looked for in many transactions of certain individuals.

That such conduct is rapidly invading the honorable professional circles, and lamentably that of medicine, is evidenced in the increasing number of methods employed by those who side-step the practice of their professions to advertise, practice by contract, or organize associations for the purpose of obtaining patronage through underpricing and cheapening their services, rather than through the skill and ability they should possess. The very fact of doing so on the part of any man is *prima facie* evidence of an admitted inability to succeed upon the merits of his work, equivalent to a confession.

Incompetence on the part of the man to honorably compete with the remainder of his calling in his community should not be charged to the profession but to the man himself. A man who cannot make of himself a good doctor would do better to look to the arts. An honest, honorable and competent cobbler should be preferred to the commercializing of a profession, or quackery. A mayoralty of a small province admits of no comparison to the corrupt ward-heeler of a large city.

The advent of such conditions presupposes a want of moral character in those responsible for them, and the nobler followers of the profession are forced to admit, and not without reluctance and chagrin, that men are admitted, tutored

and graduated in our medical schools who are devoid of that "good moral character" so universally stereotyped among the "requirements for the degree" in medical college announcements.

The methods of side-stepping are many. Some make no pretense of affiliation with the honorable medical body, and get out in the open and advertise lavishly by every means, and from this extreme to those who believe that they should be considered ethical, with one foot over the line which separates ethical professional conduct from debauched unprofessional quackery, every degree is to be observed. There is a class who may be said to be constantly "bucking the edge" in fact, and in theory they insist upon the ethicality of the methods they practice.

It would seem to require that a practitioner should be cheaper than the practice he attempts to cheapen; hence, one who inaugurates a cheap practice should be entitled to the comparative term. "cheaper practitioner."

A man is judged, in any line, by his work, in quality or result of effort, and the great majority of men are frank enough with themselves—if to no one else—to place a value upon their own services. Who is better in a position to do so than the man himself?

This self-adjudication of an inability to honorably compete with men entitled to a professional calling, coupled with a desire to get money from patients who might be attracted by "cut rates," forms the most apparent reason for the taking up of cloaks stained according to the degree of their unprofessional desires and unclean dictates, and with a sense of justification they derive from the ever-lurking venom, "*others do it, why not I?*"

## THE LATEST IN MEDICAL ORGANIZATIONS.

We are informed, through a circular, which came to our notice, of the birth of The Colorado Co-operative Medical Association, in the Commonwealth Building, Denver, with the parentage of three physicians who were thought to have had a higher appreciation of their skill than is evidenced by the offspring. Two of the three incorporators have never been identified with the local or state societies, but the third, a delegate to the Colorado State Medical Society from the Eastern Colorado Society, occasions no little jar as a surprise.

The association purposes, according to the advertising circular, to provide the "*best medical skill for a nominal sum*"—"we aim not only to *cure you* when ill, but to keep you in good health."

Under "Benefits" it is stated that members are entitled to the services of any of our physicians. They may be consulted in their office hours (9 a. m. to 9 p. m.) without charge for examination or prescription.

The membership fee is 25 cents. Dues, 10 cents per week for members over 15, and 5 cents per week for those less than 15 years of age.

To become a member it is stated that 25 cents may be paid "to the agent who calls to see you at the house" (the entire city is to be canvassed by solicitors) or to a clerk in the office with 10 cents for one week in advance. Only one member of a family is required to pay the membership fee, the remainder pay only the weekly dues.

Prescriptions are also filled from the association drug store at a maximum cost of 25 cents.

The pamphlet concludes with "special cases" which are as follows:

Chronic invalids, such as tubercular cases, which require constant attention, will be charged according to methods of treatment at a maximum rate of \$10 per month.

Genito-urinary cases which require local applications at office, 25 cents per treatment.

Diseases of women: 25 cents per office treatment.

Obstetrical cases at greatly reduced rates.

Surgery at proportional reductions.

House visits from 7 a. m. to 9 p. m., 50 cents.

House visits from 9 p. m. to 7 a. m., 75 cents.

These rates apply only to members of The Colorado Co-operative Medical Association.

We predict much success for the enterprise—in finding its proper place—then, *quantum vis!*

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## COLORADO MEDICAL JOURNAL.

At the recent meeting of the State Society, the House of Delegates, on the recommendation of the Publication Committee, voted to absorb the *Colorado Medical Journal*. This was done for two reasons: First, to eliminate one of the two unethical journals from Colorado, and, second, to utilize some of the advertisements contained in above journal.

At one time the *Colorado Medical Journal* enjoyed a fair reputation, and it was the boast of its editor, the late Dr. E. R. Axtel, that no quotation marks ever appeared before or after any article, every article was original, and written for the Journal.

Upon the death of Dr. Axtel the name of the already defunct "*Western Medical and Surgical Gazette*" was added to its caption.

The name seemed to act as a Jonah rather than a mascot, for from this period forth it gradually declined, till it was taken over by the Reed Publishing Company.

Upon the death of Mr. Reed last spring it became an asset of the company, and remained as such until the action by the House of Delegates at the recent meeting at Glenwood September 19, 1907.

Peace to its ashes. J. M. B.

### "IT IS TO LAUGH."

In the foreign districts of large cities drug clerks are sometimes asked for queer things. These requests are particularly queer when they are sent in writing, and quite justify one druggist in pasting them into a scrap-book, which will be unique when finished, as the following notes copied from the original testify:

"I have a cute pain in my child's diagram. Please give my son something to release it."

"Dear Tochter, ples gif bearer five sense worse of Auntie Toxyn for garle baby's throat and oblege."

"My little baby has eat up its father's parish plaster. Send an anecdote quick as possible by the inclosed girl."

"This child is my little girl. I send you five cents to buy two sitless powders for a groan up adult who is sike."

"You will please give the lettles boi five cents' worth of epecac for to throw up in a five months' old babe. N. B.—The babe has a sore stummick."

"I haf a hot time in my insides and vich I would like it to be extinguished. What is good for to extinguish it? The inclosed money is the price of the extinguisher. Hurry please." — *Alumni Report of the Philadelphia College of Pharmacy.*

### OFFICERS AND DELEGATES OF CONSTITUENT SOCIETIES,

1907.

*Boulder*—President, C. F. Andrew, Longmont, Colo.; Secretary, Lucy M. Wood, Boulder, Colo.; Delegates: L. M. Giffin, Boulder, Colo.; G. H. Cattermole, Boulder, Colo.

*Clear Creek*—President, George Atchison, Idaho Springs, Colo.; Secretary, A. Aberg, Idaho Springs, Colo.

*Delta County*—President, H. W. Hazlett, Paonia, Colo.; Secretary, O. P. McCartney, Delta, Colo.; Delegate, L. A. Hick, Delta, Colo.

*City and County of Denver*—President, William C. Bane, Denver; Secretary, Albert Silverstein, Denver; Delegates: C. K. Fleming, Denver; J. M. Foster, Denver; G. H. Stover, Denver; J. M. Blaine, Denver; W. A. Jayne, Denver; S. Simon, Denver; E. Jackson, Denver; George A. Moleen, Denver; A. S. Taussig, Denver; A. H. Williams, Denver; T. M. Burns, Denver.

*El Paso*—President, E. R. Neeper, Colorado Springs, Colo.; Secretary, O. R. Gillet, Colorado Springs, Colo.; Delegates: D. J. Scully, Colorado Springs, Colo.; D. P. Mayhew, Colorado Springs, Colo.

*Eastern Colorado*—President, E. E. Evans, Fort Morgan, Colo.; Secretary, R. L. Obrien, Akron, Colo.; Delegate, N. J. Phelan, Denver, Colo.

*Fremont*—President, R. C. Atkinson, Canon City, Colo.; Secretary, R. E. Holmes, Canon City, Colo.; Delegate, W. T. Little, Canon City, Colo.

*Garfield*—President, M. H. Dean, Glenwood Springs, Colo.; Secretary, W. F. Berry, Glenwood Springs, Colo.; Delegate, W. J. LeRossignol, Rifle, Colo.

*Lake*—President, J. A. Jeannotte, Leadville, Colo.; Secretary, H. A. Cal-



kins, Leadville, Colo.; Delegate, Sol. G. Kahn, Leadville, Colo.

*Las Animas*—President, James G. Espey, Trinidad, Colo.; Secretary, Alfred Freudenthal, Trinidad, Colo.; Delegate, D. G. Thompson, Trinidad, Colo.

*Larimer*—President, W. O. Upson, Fort Collins, Colo.; Secretary, E. Stuver, Fort Collins, Colo.; Delegate, E. Stuver, Fort Collins, Colo.

*Mesa*—President, G. R. Warner, Grand Junction, Colo.; Secretary, A. G. Taylor, Grand Junction, Colo.; Delegate, U. S. Abbott, Grand Junction, Colo.

*Montrose*—President, J. Q. Allen, Montrose, Colo.; Secretary, Carl Johnson, Montrose, Colo.; Delegate, A. Johnson, Montrose, Colo.

*Northeastern Colorado*—President, W. Greig, Sterling, Colo.; Secretary, M. Eugenia Barney, Sterling, Colo.; Delegate, J. C. Chipman, Sterling, Colo.

*Ouray*—President, W. W. Rowan, Ouray, Colo.; Secretary, J. U. Sickenger, Ouray, Colo.; Delegate, W. W. Rowan, Ouray, Colo.

*Otero*—President, E. G. Edwards, La Junta, Colo.; Secretary, W. Milroy Moore, La Junta, Colo.; Delegate, J. F. Kearns, La Junta, Colo.

*Pueblo*—President, H. B. Ortell, Newark, N. J.; Secretary, Crum Epler, Pueblo, Colo.; Delegates: M. J. Keeney, Pueblo, Colo.; Hubert Work, Pueblo, Colo.

*San Luis Valley*—President, John McFadzean, Del Norte, Colo.; Secretary, J. Tracy Melvin, Saguache, Colo.; Delegate, O. P. Shippey, Saguache, Colo.

*Teller*—President, W. F. Hassenplug, Cripple Creek, Colo.; Secretary, Thomas A. McIntyre, Cripple Creek, Colo.; Delegate, A. C. McClannahan, Victor, Colo. Dyde, Greeley, Colo.; Delegate, C. H.

*Weld*—President, C. A. Ringle, Greeley, Colo.; Secretary, Charles B. Call, Greeley, Colo.

## Original Articles

### PRESIDENT'S ADDRESS.

H. R. BULL, B. S., M. D., Grand Junction, Colo.

*Members of The Colorado State Medical Society and Guests of the Association:*

For the first time since the birth of this Society, we have crossed the great continental divide, and the western slope is honored with the meeting. This is the thirty-seventh annual meeting of this society, and this meeting marks an epoch in its history.

In 1871 Colorado was but a territory, little known, and was recently connected with the civilization of the east by the construction of the Union Pacific and Kansas Pacific Railroad to Denver. Western Colorado was then a *terra incognita*. This delightful Glenwood Springs with its healing waters, its bracing atmosphere, and its wealth of sunshine and cheer, together with all the fruitful valleys of this western slope, were then an unexplored, mostly Indian reservation with only a few trading posts along the old trails of the 49'ers.

Truly, "Westward the course of empire wends its way."

The first meeting of the Territorial Medical Society was called by Dr. W. H. Williams, corresponding secretary of the Denver Medical Society, in accordance with a resolution adopted by that body.

Denver was then a town of less than 5,000 inhabitants, and had remained with very little growth during a period of ten years.

On the 19th of September, 1871, sixteen members of the medical profession were in attendance upon the convention, and organized this society, electing Dr. R. G. Buckingham, president. From that date until the present time, annual meetings have been held, while the mem-

bership of this society has been constantly increasing, and its influence widening. We have now a state population of 600,000 people, with over 1,500 physicians, of which we have in this society about 800.

It is an honor worthy the ambition of any man to represent such a society as one of its officers, and I desire at this time to express my deep appreciation of this honor which you have conferred upon me, and to thank you for the active and hearty cooperation which has made the success of this meeting assured. The scientific program has been prepared with care, and will bear favorable comparison with the program of older and larger societies.

We have good reason to take pride in our professional organizations, County, State and National, and in the attainments of our members, attainments made brighter by the quiet, unassuming character of the great of our profession. If the victories of peace were really as renowned as the victories of war, our Colonel Gorgas should receive as triumphant a welcome home as did the hero of Manila bay. His victory in rendering the Canal Zone livable and healthful by making an effective warfare against the *stegomyia calopus* and the *anopheles* may not have been as spectacular as modern warfare, but it is less expensive and most effective in enlarging the boundaries of civilization. His recently expressed opinion, that within the next two or three centuries the tropical countries, which offer a much greater return for man's labor than do the temperate zones, will be settled by the white races, and that the centers of population and civilization be transferred to the equatorial regions, may not turn out to be strictly true, but its possibility cannot be denied as it would have been a decade ago.

It is the laudable ambition of each successive president of such a growing society as this, to leave it in better condition than it was before his administration began; nor should his active interest in the success and progress of the society cease with his retirement from office. Having been for many years a member of this society, having grown up with it, I speak from experience when I urge upon the older members of the profession and the ex-officials of this society that they owe it to themselves and to the younger members, to attend these meetings and to continue to take an active part in the proceedings.

Who of us was not made a better physician by attending the meeting at Denver last year, or the one at Colorado Springs the year before? The physician can well make these annual meetings his much needed annual vacation. A suitable epitaph for many a physician, called from his field of labor before his time, would be, "He never took a vacation."

Unity of purpose and effectiveness of organization have been greatly stimulated by the affiliation of the county societies with this body, and through it with the American Medical Association. It is the county medical society which is the foundation of organized medical advancement. Its benefits are felt both by the community and by the members in the improvement of practical conditions. "It takes up such matters as the prevention and control of disease, the inspection of the public schools, and the education of the laity along semi-medical lines in order to protect them from quacks and impostors. It improves the personnel of the profession by weeding out the braggart and the unfit and in helping the honest physician whose training has been inadequate, and in every way sustaining and supporting each other and the profession as a whole." We have witnessed

the old professional jealousies transform to warm personal friendships through the contact and acquaintance formed here. In this day of charlatanry paths, and isms, it is absolutely necessary for all good men in the profession to get together in order that we may enjoy the fullest confidence of the communities in which we live. What hope can an imposter have of winning a damage suit against an honest physician where there is a united profession in an active medical society? The selection of a wide-awake, capable secretary, who is sufficiently interested to give the necessary attention to his duties, is of vital importance to the very existence of a medical society. Members should be notified of the time and place of meeting, the subject under discussion, and a short abstract, together with other official acts of the society, should be sent in for publication in *COLORADO MEDICINE*.

It would be of great advantage to each county society if one of its members would specialize along the line of practical bacteriology in connection with his other practice, and be able to promptly make cultures or examine some of the common pathological specimens. While we have an excellent State Board of Health, where the laboratory diagnostic work in diphtheria is carried out thoroughly, yet the distance is such that the results of these examinations are necessarily delayed too long when specimens are sent in from distant parts of the state. Ever since its organization, the work of the State Board of Health has been crippled and limited by the lack of sufficient funds to make its work thoroughly efficient. I speak advisedly because I served for ten years as a member of this Board. At the last meeting of the state legislature the pittance of \$5,000 was appropriated for the work of this Board; barely sufficient for office expenses, collection

of vital statistics, and continuation of laboratory diagnostic work in diphtheria. We need a laboratory of hygiene in this state, with its varied industries, old and new, each with its sanitary problems, demanding solution. Our Board of Health should have at least two qualified medical inspectors, who could be sent from point to point in the state to consult and advise with the local authorities regarding matters of public health.

The time has arrived when the state society and the county societies should take the matter up with no uncertain action, and insist in a memorial to the appropriation committee of the next legislature that an adequate sum be appropriated for the use of this Board.

The present method of the commitment of the insane to our state institution for their care must have impressed every member of this society who has given the matter any attention, as unscientific and farcical in the extreme. To be an examiner in lunacy under the present law requires no special training or fitness. Scientific, careful testimony before a lay jury has often less weight than the testimony of some osteopath, or self-styled metaphysicist, or the sensational comments of some yellow newspaper.

An honored ex-president of this society, who has perhaps a wider experience in dealing with this class of cases than any other one in the state, states "after an experience of twenty years with the present lunacy law, that it is an inquisitorial fake, without medical or legal accuracy, seeking to determine scientific facts through illiterate laymen by means of public torture to the patient and his family."

Nearly all states examine in lunacy by a commission of two physicians and a justice of the peace, or the county clerk acting in the place of the justice of the peace in some states. A bill to improve



the present lunacy law has been twice introduced into our state legislature; two years ago into the senate, where it received no consideration, and again this year when it did succeed in getting through the house.

This bill, which it is hoped will be enacted at the next legislature, provides for the county judge to appoint two physicians and one attorney to comprise the commission. The three commissioners to visit the patient and bring in their report to the county judge. This procedure would eliminate the sheriff's office to a large extent and do away with the lay jury. If we bring our concerted influence, both individually and through our county societies, upon the members of the legislature from our various districts, there is no question that this bill will become a law at the next session of the legislature.

COLORADO MEDICINE, the official organ of this society, has been ably edited, well printed, and in every way a credit to the profession of our state. Its growth has kept pace with the growth of the society; its editorial articles, its comments on the progress of medicine in all departments, and its monthly reports of the meetings of the constituent societies are lines of special strength, while its freedom from objectional advertisements make it a model as an ethical journal.

The professions of pharmacy and medicine are so closely related that it is important that the closest harmony should exist between them. Pharmacy is in fact a special branch of medicine, and as a special branch of medicine has made great advances.

In the multiplicity of new remedies no physician need be ashamed to admit his non acquaintance with many things which may be learned with profit from the educated up-to-date pharmacist.

To have a section at the meetings of this society devoted to pharmacology and therapeutics to which we shall invite the pharmacists of the state to meet with us, is worthy of our consideration.

The preparations of the United States Pharmacopoea and of the new National Formulary fully meet the requirements of every day practice and can be compounded by any educated pharmacist.

We should depend on these standard preparations, rather than be influenced by the circulars and other advertising matter with which our offices are flooded, into prescribing the so-called specialties and proprietary preparations. Who can so well bring the attention of the busy practitioner to these standard preparations of known composition and strength, as the pharmacist of our acquaintance.

This is to my mind the most practical method of eliminating the present tendency to prescribe high priced proprietary preparations, to the detriment of professional confidence and the lowering of the standards of professional attainment. Such a movement would promote the interests of pharmacy and scientific medicine.

During the past year the State of Colorado has been classed by the United States Census Department as a registration state, in preserving an accurate registration of its mortality statistics. Outside of two or three of the larger cities of the state there are no accurate birth statistics, the majority of physicians ignoring this requirement. So far as I can learn no penalties have ever been imposed for this failure to report, and it is a very easy matter to grow careless.

On account of this state being a great natural sanitarium for those afflicted with, or predisposed to tuberculosis, and on account of the rapid increase in the number of cases of Colorado acquired tuberculosis there is a wider field of use-

fulness for accurate health statistics than ordinarily belong to a board of health.

It would be of advantage if the legislature would create the office of Registrar of Vital Statistics in connection with the State Board of Health. We should have through such an office, accurate records compiled relative to the movement of population, effects of altitude and occupation upon disease and cause of death. Such records form the basis on which the structure of sanitary science must be erected. According to an eminent sanitarian, "Whatever hurries or retards marriages, increases or decreases the number of births, or throws light on the cause of sickness and death, should be found numerically treated in the reports of local and state health authorities.

That if the unborn historian of hygiene of the twentieth century shall find one anomaly more curious than any other, it will be that the twentieth century, opening with its prodigious resources immediately available, ran a third or a half of its course before these resources became so standardized that each unit of power might be accounted for in a definite scheme of vital statistics.

Laying aside matters pertaining to medical organizations, and of strictly professional interest, it is well for us to remember that our usefulness and influence depend finally on the degree of confidence that the laity reposes in us. With this end in view it behooves us to practice toleration, patience and consideration. As far as is consistent with professional dignity, and a proper attitude toward our professional brethren, to take the laity frankly into our confidence in matters of general interest. The axiom of greatness, the greatness of service, as expounded by the Saviour of the World, 2,000 years ago, finds its deepest application in the unselfish services constantly

being performed by the earnest physicians everywhere. The opportunity to render service to the community as a whole comes to many of us.

I feel that I am not putting the matter too broadly when I state that any board of public control having to do with the sanitary problems of light, heat or ventilation, drainage or hours of confinement, is not complete without having a practical physician as a member of such a board. The first of these in every community is the school board. From an extended observation I have learned that compulsory vaccination is very generally practiced in communities where a physician serves in such a capacity. The influence of the schools in disseminating infection, is lessened tremendously, where the school board, acting promptly and intelligently under the advice of the physician member, actively cooperates with the board of health. Mild cases of scarlatina, measles or whooping cough are popularly supposed to be non-contagious, and for this reason, or because of indifference on the part of the parents, are allowed to return to school while capable of communicating the disease. It is very helpful in these matters to have the hearty cooperation of the teachers, and the teachers deserve much credit for their watchfulness and promptness in detecting children just developing contagious diseases.

The influence of the physician is needed to protest against too long study hours, to encourage the introduction of physical culture, manual training and domestic science, rather than cramming continuously over books. In the larger cities the medical inspection of school children with special reference to defects in sight and hearing, has done much to lighten the heavy burdens imposed by our modern educational system upon the shoulders of childhood.

There is something worthy of the striving in public life, too, which should appeal to the physician, particularly when rich in the wisdom of experience, and with a competence sufficient to meet his wants, the days of his greatest professional activity are over; who knows the reality of the needs, hopes and aspirations of society as well as the one who has through long years counted its pulse literally as well as figuratively. Professional life may be a means not always to an end, but a means to a rounded out usefulness of still wider influence.

We have in our profession so many men of broad culture, with wide acquaintance and long experience, with beautiful homes in our cities or ranches in our valleys; men who are trusted and honored in the communities which they have served, who could discharge these public duties with signal ability.

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*TRANSPERITONEAL-RETRO-GASTRIC SURGERY, WITH REPORT OF A CASE OF PANCREATIC CALCULI AND ONE OF RETRO-GASTRIC SARCOMA.*

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Little attention has been given to conditions requiring surgical attention posterior to the stomach, or posterior to all the layers of peritoneum in the upper part of the abdomen, except when the pathological manifestation has assumed considerable proportions, and carried itself, in part at least, sufficiently forward to be more or less readily accessible.

Such conditions usually consist of cysts of various kinds, generally involving the pancreas and requiring only drainage.

Most cases of recurring violent paroxysmal pain in the upper abdomen are

rightly attributed to cholelithiasis, when kidney stone can be excluded.

The rules for dealing with stones in the gall tracts have been well understood for many years and quite generally accepted by those who do much operative work. The same, however, cannot be said for the lower end of the common or pancreatic ducts.

My experience in abdominal surgery, including the gall tract, and the literature of the subject, had but illy prepared me for the following case:

*Case I.* Mrs. D., aged twenty-seven, of La Harpe, Ill., referred to me by Dr. Gahm, June 1, 1905.

She was the mother of one child seven years; her family history was negative; she had never had any serious illness though she had never been strong. For several years she had had occasional attacks of severe pain in the upper abdomen, which had been diagnosed and treated as hepatic colic. Since the birth of her child she had suffered more general discomfort and was more feeble than before.

Examination revealed a retroverted uterus, cervical and perineal laceration, with epigastric tenderness which was most marked over the fundus of the gall bladder. Hypodermic injections had been required at times to relieve the severe pain in the epigastric region. Being frail and anemic she did not seem to be of sufficient strength to have all of the work done at the time, which was needed. On June 6, 1905, after curettage, the cervix and perineum were repaired, a right ovarian, and a left parovarian cyst were removed, the uterus replaced and secured in position by the Mayo modification of the Todd-Gilliam operation on the round ligaments. Upon palpation of the upper abdomen, it seemed certain that calculi were present, and it was supposed that they were



in the gall tracts. Her recovery was without incident.

After returning home she gained in weight, and for a time was decidedly improved in every way.

January 3, 1906, she was seen again, giving a history of a severe attack of her old epigastric pain, which was relieved only in part by hypodermic injections of morphine. The condition was again diagnosed as biliary colic. After the usual vertical incision in the right rectus it was impossible to find any evidence of a gall bladder, nor could there be found any calculi in the biliary passages.

Running directly across the abdomen,

it grew into every branch and diverticula. The duct walls were one-eighth of an inch in thickness and of great strength.

The calculus was whitish-green in color. Where the calcarious deposit crossed the aorta and was disturbed by its movements the deposit was separated into numerous pieces and some of their bearing points were polished almost like ivory by the friction. The removal of the various sections was most difficult owing to the firm grasp at all points of the calculus by the thickened duct wall, and was only accomplished by going directly down upon each segment, as pieces



however, posterior to the stomach, and extending throughout the entire length of the pancreas, was a dense calcarious mass. The stomach had been previously found to be somewhat prolapsed, and it was accordingly drawn downward and a three inch verticle slit was torn through the least vascular part of the gastric mesentery, exposing well the head and body of the pancreas. A sharp-pointed, curved scissors was next passed through the pancreas at the junction of the head and body until it came in contact with the largest calcarious mass. By forcibly spreading the blades a considerable exposure of the calculus was obtained. By aid of a blunt dissector a calculus was separated from the vice-like grip of the tissues with which it was intimately incorporated, as

could not be drawn from a smaller into a larger part of the duct. So difficult and tedious was the procedure that two and one-half hours were occupied in removing all the calculi except from a small portion of the tail. These could not be reached without dangerous traction, making another incision, or unduly prolonging the operation. The smaller openings made in the body of the pancreas were sutured with catgut and the main opening through which the largest calculus was removed, drained with one-half inch fish tail drainage tube held in place by a purse string suture and a stitch of catgut. The general retrogastric space was drained by a smaller tube to catch any pancreatic overflow from defects in

suturing, drainage by the natural route, or through the large tube.

These calculi together formed a perfect cast of the greatly dilated pancreatic duct system. The largest stone measured 15/16 by a little over 2 inches in its greatest tranverse and longitudinal extent. Around its greatest convexity it measured three inches. I believe this is the largest pancreatic calculus so far removed. Its left extremity was bifurcated and continued in a chain of stones from each prong towards the tail of the pancreas. The total weight two days after removal was 280 grains.

Strange to say, there was no evidence of inflammatory or other damage to the pancreatic gland structure and after her recovery, which was without incident, she was able to digest fats without difficulty and her digestion has remained unimpaired to the present time, over one and one-half years.

The case is interesting, not alone on account of the great size and extent of stone formation, but also because of the entire absence of pancreatic secretory or digestive disturbance in the intervals between the attacks of pain. I am convinced that the operative plan followed in this case offers the most practical route for dealing with calculi lodged in the lower part of the common bile duct, as it gives ready access to the posterior part of the descending portion of the duodenum, and in such a direction as not to necessarily endanger other important structures. I was also agreeably surprised to note that repair of the greatly cut and lacerated pancreas was apparently prompt and complete. Drainage was maintained constantly for two months and after that time intermittantly for five or six months. Several small stones were discharged with the drainage. June 6, 1907, she reported that there had been no drainage

whatever for eight months, and that her general health had been good, though recently she had noticed slight twinges of pain occasionally, similar to the old trouble but not severe enough to more than slightly annoy her. This was probably due to remaining calculi or to reformation. The calculi were composed of carbonate of lime.

Reports of only forty-nine cases were found, and in but one was a probable diagnosis of pancreatic calculus made prior to operation. While it is always a comfort to know that others have done no better, yet we can but be impressed with the ignorance that makes this confession necessary, and at the same time be stimulated to greater effort in the diagnosis of this important condition, at least keeping the matter enough in mind during our operative work in the upper abdomen, not to permit, as I am certain has been done in the past, those cases to go on unrecognized which could be safely dealt with and entirely relieved of their suffering. The author has diagnosed pancreatic calculus in one other case, but as it has never come to operation or postmortem, the diagnosis could not be verified. Especially impressive was the ease with which this space could be reached when a bowlster was placed beneath the back, in the lower part of the dorsal region, to throw the spinal column well forward. The curving of the upper end of the incision to the left is imperative if the usual incision for gallstones be utilized.

Parke and Dennis state that pancreatic calculi represent no surgical importance save as the cause of cysts or chronic pancreatitis. Hektoen and Reisman consider catarrh of the ducts as the cause of stones, and the result, probably, profuse productive pancreatitis, total destruction of the gland function and glycosuria as a prominent feature. V. Bergmann mentions

colic similar to the passage of biliary calculi, gastric and intestinal indigestion, emaciation, fatty stools, ptyalism, jaundice, due to pressure on the common bile duct, abscess formation, and passage of calculi per rectum, as among the symptoms and complications liable to result from pancreatic calculi.

His advice to carefully palpate the head and the body of the pancreas during operations upon the gall tracts to detect the presence of stones is timely. He advises cutting down directly upon the stone through the substance of the gland unless it be lodged in the ampulla of Vater, impacted in the papilla, when it is best dealt with through an incision into the duodenum.

Suturing the incision in the pancreas he considers good surgery, if there is no acute inflammation about the calculus bed and if supuration exists, he recommends tamponade.

It is claimed by some writers that diagnosis of pancreatic calculus is impossible, but Monyihan made a diagnosis, removed the stone through the duodenum and the patient made a good recovery. The stone was one-half inch long and lodged in the termination of the pancreatic duct. Symptoms which led to diagnosis in this case were steady loss of health, gradual wasting, irregular pigmentation of the skin in patches (very closely resembling the pigmentation of *molluscum fibrosum*), persistent attacks of epigastric uneasiness of the hepatic colic type, though less severe, and unattended, until very late, by jaundice, which was always trifling, though unmistakable, and pain passing through from the front to the middle of the back. Stools were frothy and greasy. Under chloroform some indefinite swelling could be felt above the umbilicus and a little to both sides of the median line, though chiefly to the right.

While we may not expect to find all the above symptoms in many cases of pancreatic calculi, this fact does not excuse us from exercising every care in examination and palpation of this region, with the stomach and bowels as empty as possible of food and gas, in all supposedly gall stone cases, coming to operation.

It must not be forgotten that in any palpable pathological manifestation involving the pancreas, or of the retroperitoneal space, will not be influenced in its position by respiratory movements unless it is pedunculated and then not at its base or pedicle.

*Case 2*—Mr. Charles R., aged 39, was referred by Dr. Kasten, November 11, 1906, with the following history:

The patient had had no severe illness, but one and one-half years ago he became constipated, and during the winter of 1905 and 1906 he had a swollen testicle, which was removed.

After May, 1906, the constipation became worse, pain over the left ilium interfered considerably with work and sleep; his breath was foul; the pain came on after eating and lasted from one hour to the entire day. The constipation continued, accompanied by poor appetite and considerable loss of flesh. Examination of the urine was negative, save the presence of indican. The blood showed hemoglobin 100 per cent., and no alteration of the blood corpuscles as to number, form, or relation. He complained of a constant sensation of heaviness in the epigastrium. His teeth were loose and his gums were in bad condition. The abdomen was scaphoid and a tumor almost centrally located in the upper part of the abdomen could be easily outlined. The mass was immovable and apparently had all its attachments posterior to the peritoneum. The growth was about 2 by 3½ inches with the long axis verticle, and placed slightly to the



right of the median line. It received impulses from the aorta upon which it seemed to rest, at least in part.

Median incision revealed the presence of a solid immovable mass of the above dimensions, placed retro-peritoneally, behind the stomach and resting upon the aorta and inferior vena cava.

In this case, also, the stomach was readily displaced downward, sufficiently to enable ready access to the growth through a verticle rent in the gastric mesentery. After freeing all the attachments in front and on the sides it was found to infiltrate about the abdominal aorta, vena cava and branches so that its removal was impossible. He survived the operation about four weeks, when he died from exhaustion. The freedom from pain after operation was probably due principally to freeing the incorporated nerves from irritative pressure.

I was pleased to note the ease with which it was possible to invade this space which I had formerly considered almost inaccessible. Moynihan advises this route when the stomach can be displaced downward sufficiently to give the desired room, and I am convinced that in the majority of cases it will be found satisfactory in dealing with the pathological conditions in the upper part of the space, and a rent through the gastrocolic omentum will be the best in dealing with the same, located in the lower part especially if the gastro-hepatic messentery is short.

Miscroscopic examination of the specimen showed it to be sarcoma. It would be interesting to know whether the enlarged testicle removed one year previously bore any causative relation to this growth.\*

\*A letter received from Dr. G. W. Jones states that the tumor removed by him involved the epididymus, and was tuberculous.

# Progress of Medicine

## INTERNAL MEDICINE.

EDITED BY

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### THE TREATMENT OF SYPHILIS IN THE LIGHT OF RECENT RESEARCHES.

Prof. Lesser, Berlin: Success in transmitting syphilis to lower animals, the possibility of experimental study of the disease and the discovery of its specific cause have greatly facilitated research in this field, and Prof. Lesser (*Deutsche Med. Wochenschr.* No. 27, 1907,) discusses the bearing of these studies upon treatment. Now that prompt and exact diagnosis of the primary lesion is possible, the question of excision is again under discussion. Neisser's results with apes have not been favorable to the operation, but it is believed that in man it may be helpful, that perhaps the infection may be more easily dealt with even if excision does not dispose of all the organisms, that perhaps the body itself may be able to rid itself of the few that remain.

Finger kept a patient under observation for nearly two years after the excision of the primary effect without noting any indication of general infection, and while "one swallow does not make a summer," its coming is suggestive. Given a primary lesion showing the spirochaetes, it should be excised and as we can not feel sure that all the virus has been removed, general treatment should follow, but when? Hoffman has shown that the virus may be present in the blood within six weeks from the date of infection. The secondary manifestations are probably due to metastases of the spirochaetes, the eruption being the visible result of the reaction of the tissues to the presence of the organisms and perhaps the secondary symptoms have their incubation period, it is even suggested

that it is three weeks, corresponding to the period for the primary effect, and reasoning so, it is advised that general treatment be begun six weeks from date of infection. Recurrences are due to failure to destroy all the spirochaetes, and as they are scattered throughout the body, treatment should be continued for a long time, though interrupted.

That mercury really kills the organisms has been shown by Thalmann, and he believes that the increase in intensity of the secondary symptoms and rise in temperature often following closely the beginning of general treatment are due to the liberation of endotoxines due to wholesale destruction of the spirochaetes. Hoffmann and Beer have shown that the action of mercury is prompt, one sublimate injection causing the immediate disappearance of the virus from the blood of a congenital syphilitic, and they believe that prolonged mercurial treatment will completely eradicate it from the body, but it is the experience of many that thorough mercurial treatment may be followed by recurrences, and this coupled with the fact that mercury is not always an unmixed blessing, has led to diligent search for a satisfactory substitute, and the remedy that is most favorably spoken of just now is atoxyl. Lesser reports his experiences with the drug in treating twenty-eight patients; three with primary lesion and swelling of the inguinal glands, nineteen with secondary symptoms, one with iritis, one myelitis, some relapses. There was one case of galloping syphilis and one tertiary; sixteen had not been treated with mercury. Intramuscular injections of atoxyl were given each second day, towards the last, each third day, a 10 per cent solution being used and the dose for men 0.5, women 0.4, occasionally 0.6 for men, total dosage of not more than 6.2. The results were clearly good, in some patients very good. The primary effect

healing quickly, the secondary symptoms disappearing rather more slowly than would be expected under mercury. The iritis with synechia was cured by three doses, however the patient had been given six mercurial injections. The ulcerations of malignant syphilis healed promptly, as did a glossitis (tertiary) a gummatous infiltrate of the nose gradually disappeared, the patient with myelitis was much improved by 2.9 in six doses following four calomel injections and four inunctions. In all cases the local treatment was indifferent, one patient was given a hypodermic of atoxyl beneath the chancre and several were given the remedy by local penciling, in addition to the injections, apparently with advantage. Unpleasant after effects were frequent, in eight patients pain in the stomach, colic, nausea, frequent vomiting, diarrhoea, dizziness, and in one a total dose of 1.7 caused nephritis, that lasted four days, an additional dose of 1.5 caused a second attack that lasted three days, and three days after the urine had cleared of albumen, a dose of 0.3 caused its reappearance; another developed albuminuria lasting one day after the second dose of 0.5, but it did not reappear during the continuation of the treatment. When there was intestinal irritation, a dose of morphia sulphate 0.003 and sodium bicarbonate 0.3 after the injection gave relief.

Bornemann has reported blindness caused by the drug, but the total dose was 27.0 and it was continued after the appearance of symptoms of intoxication; and Schild warns against its use if there is organic disease of the heart, and Lesser has seen marked slowing of the pulse. Schild found arsenic in the urine two days after the first, and seven after the last dose, and Bornemann six weeks after the last dose. Two-thirds of the patients gained weight, and in only three was there

loss ( $\frac{1}{2}$ — $1\frac{1}{2}$  Kg.). Lesser concludes: Atoxyl causes a disappearance of the visible symptoms of syphilis, sometimes promptly, sometimes slowly, and may be considered a valuable addition to our therapeutic resources, especially in patients who are very sensitive to mercury.

W. J. B.

#### THE TREATMENT OF SCARLET FEVER.

Schick, of Prof. Escherich's clinic in Vienna (*Berl. Klin. Wochenschr.*, No. 23, 1907,), state that scarlet fever may be transmitted by well people, and children that have been exposed, should be kept from school not less than two weeks and under observation of a physician; the attending physician, when making his visit to a scarlet fever patient, should wear a linen coat, to be changed on leaving the room, the hands disinfected, etc.

The patient may be dismissed from the hospital at the end of five to six weeks, but should not return to the home if there are other children, but to the home of a relative where there are no children, for two weeks more; during this time receiving a daily evening (at least each second day) bath and frequent changes of clothing and allowed to return to school at the end of eight or nine weeks from the beginning of attack.

Every scarletina patient, it matters not how mild the attack, is to be kept in bed at least four weeks; and may take cocoa with milk, white bread, butter, fruit and honey, but no meat, no antipyretics, cool packs or sponging of body but not of feet or hands, and the temperature and color of the hands and feet must be watched; if cold and cyanotic the cool pack at once discontinued and hot water bottles substituted, no cold bathing, danger of collapse. Desquamation should be promoted by warm soap baths and anointing with vasaline or

lanolin, if the skin is dry and there is itching, rubbing with fats. If there is slight angina, cold compresses changed every three hours during the day but left on all night; older children may gargle 1 to 2 per cent Hydrogen Dioxide, the teeth must be kept scrupulously clean and in severe cases the mouth must be cleansed frequently, three or four times a day washed with ear syringe, no blowing of powder into, nor syringing of the nose. The lips anointed with 3 per cent boracic acid vasaline ointment. Greatest possible amount of rest. If there is otitis—redness and swelling of the drum—5 per cent carbolygly cerrine luke warm dropped into the ear three times a day, hot or cold applications: If there is bulging, pain, high fever, paracentesis, otorrhea, 2 per cent Hydrogen Dioxide two or three times daily, cotton plug in ear, watch for mastoid involvement. If cervical glands are swollen, hot cloths, painting with iodine, or 10 per cent ichthyol ointment; if there is fluctuation incision under light narcosis. If there is rheumatic involvement of the joints, keep them at rest; if suppurating, drain. For weak heart, digitalis or digalen, black coffee, spirits camphor subcutaneously, caffeine; bowels must be kept open.

Moser's Antistreptococic Serum has been used in the clinic for years, and its value established. If given within the first three or four days, there follows usually critical fall in temperature and amelioration of all the grave symptoms, but it is of no value after the fifth day. It is of most value in the toxic cases. The dose is 200 cc under the skin of the abdomen. Objections are: that the serum does not keep well, large doses are necessary, unpleasant after affects, it does not prevent nephritis. Oedema and albuminuria in mild cases disappear without special treatment, diuretics should not be given. Ergotin 1-2:150 every two



hours, one teaspoonful, adults more. During convalescence nonalcoholic preparations of iron. To encourage diaphoresis, warm packs, dry or moist, not more than thirty minutes, not so long unless patient feels comfortable in them. If there is nephritis, salt, free diet, diminishes the oedema but not the albumin and blood. If uremia develops with cramps and coma, venesection (200 to 300 cc in children of six to twelve years, adults, 500 cc) followed by an equal quantity of salt solution subcutaneously or high enemas of warm water, if necessary repeated; rest in bed, salt, free diet (so far as possible), no meat, continued for eight days after disappearance of albumen from urine, careful temperature records. If, after getting up, the temperature rises, patient should return to bed. If temperature remains normal, may go out two weeks after leaving bed.

BAIRD.

#### NERVOUS AND MENTAL DISEASES.

EDITED BY

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##### A SERUM FOR MENINGITIS.

The new serum devised by Dr. Simon Flexner, of New York, director of the Rockefeller Institute of Medical Research, was used with apparent success in three cases of cerebro-spinal meningitis upon patients respectively 23, 16 and 3 years of age, at Castalia, O. In the opinion of the local profession, fatal results would have been inevitable without the new remedy.

##### SENILE TREPIDANT ABASIA.

Taylor (*Boston Med. and Surg. Jour.*), calling attention to this disorder, reports some cases which demonstrate the difficulty in locomotion, although the patient gives no indication of definite local or general disease. A woman of 83

years, when standing and asked to take a step forward, found it impossible to do so by an ordinary act of the will. After much difficulty and hesitation, she would advance by uncertain steps a short distance. The gait, however, was not that of ordinary feebleness, neither was it spastic or ataxic. After certain exercises she improved for a time. Two years later, she had given up walking, but at this time feebleness was a considerable element. In a man of 75 years, with no motor or sensory disorder, the same difficulty in starting and progressing as in the previous case was noted, and again the same disproportion between any physical signs of disease in the motor or sensory tracts and the disturbance of locomotion. Petren, who, of recent authors, deals with the subject most extensively, believes that sclerosis of the cerebral vessels brings about a mental state producing a subjective feeling of difficult locomotion. It is therefore a "Vorstellungs Krankheit." He puts aside hereditary influences and hysterical conditions as causes. (Hysteria, however, in a large sense, is exactly a *Vorstellungs Krankheit*.) At this time when the general subject of arteriosclerosis is demanding much attention, it is worth while to call attention to trepidant abasia, as illustrative not only of the infirmities which the vascular lesions themselves produce, but also as demonstrating a probable secondary effect on the mind, leading to practical incapacity for voluntary walking movements.

##### HAVE FORMS OF GENERAL PARALYSIS ALTERED?

Clark and Atwood (*Jour. N. and M. Dis.*, Sept., 1907,) discuss this subject on the basis of an analysis of 3,000 cases of general paresis in the asylums of Ward's Island and Central Islip Hospitals, New York. There is much advan-

tage, in classifying types of paresis, to be able to view the whole course of the disease, as the grandiose complex is not infrequently established late. It often suffers preliminary checking by hypochondriacal depression. Again, etiological factors, other than syphilis, such as alcohol, tinge the prodromes, produce ideas of marital infidelity, etc. The gradual increase of the simple dementing form during the last few years show that some cases of cerebral lues are finding their way into this class. Moreover, many simple dementing varieties of earlier years, were lost in their inclusion with the terminal dementias. The grandiose element in paresis is the true disease complex. The euphoric syndrome in recent time appeared less extravagant. The grandiose type predominates in about 70 per cent of all cases, the dementing form occurs in about 20 per cent, and the depressive form in 10 per cent of cases. Specific treatment of syphilis has largely been discarded. Dependence is placed upon hydrotherapy, diatetics and hygienic surroundings.

#### OPHTHALMOLOGY.

EDITED BY

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#### THE OPHTHALMO-REACTION OF CALMETTE.

A. Calmette (*Gazette des Hospitaux*, June, 1907, and abstracted in *The Ophthalmoscope*, Sept., 1907,) has described a simple method of ascertaining whether tuberculosis is present by dropping a little tuberculin into one eye. In order to avoid the irritating effects of glycerine on the conjunctiva, Calmette uses a solution of dry tuberculin, precipitated by alcohol at 95°, in distilled and sterilized water. The liquid, which must be fresh, has a strength of 1 per cent. When this solution is dropped into the eye of a healthy subject, no reaction follows. Those who suffer from tuber-

culosis present a very definite local reaction, now known as the "Ophthalmoreaction of Calmette." Thus, in 3 to 5 hours after the liquid has been placed in the eye, there is obvious congestion of the tarsal conjunctiva, which becomes of a lively red color and the seat of more or less intense oedema. It is accompanied by lacrymation. At the end of six hours filaments of fibrinous secretion may be seen in the conjunctival cul-de-sac. The reaction attains its maximum in from six to seven hours. It disappears after eighteen hours in the child, and after from twenty-four to thirty-six hours in the adult. The experiment produces no pain and but trifling discomfort. Since the publication of his first notes Calmette and his pupils have employed tuberculin on a large scale, and more than a thousand trials have been made by hospital physicians in Paris and the provinces. All observations go to show that the ophthalmoreaction can be obtained in all forms of tuberculosis, unless the patient is moribund, or almost so. Newly-born babies fail to show the reaction, being exempt or nearly exempt from tuberculosis.

#### MYDRIASIS AND PULMONARY TUBERCULOSIS.

Bichelonne (*Ann. d'Oculistique*) reports the case of a soldier aged 20 years, with evidence of consolidation of the apex of the right lung, who came under his care for mydriasis of the right eye. Bichelonne considered the mydriasis to be due to irritation of the sympathetic from pressure by a tuberculous gland. He discusses the published statistics as to the occurrence and frequency of pupillary inequality (in the early stages mydriasis from irritation of the sympathetic and later myosis from its destruction), in connection with pulmonary tuberculosis, and comes to the con-

clusion that if the usual causes of anisocoria are excluded, the presence of unilateral mydriasis may be an important sign in the diagnosis of incipient phthisis.

#### PURULENT CONJUNCTIVITIS IN A BABY DELIVERED BY CAESARIAN SECTION.

Cases of purulent conjunctivitis in babies delivered by Caesarian section have been reported by Jardine, Veit and Cullingworth. Terson (*Annal. d'Oculist*, July, 1907,) describes a similar case. Tuffier performed Caesarian section in a woman who had previously gone through a very different accouchement, as a result of which an ano-vaginal fistula persisted and led to the uterus by means of an exceedingly narrow and tortuous passage. The section was performed at term, without accident. As soon as the baby's head appeared in the uterine incision, it was noticed that there was an intense purulent ophthalmia of both eyes. The pus contained staphylococci, together with diplococci, often grouped in tetrads, and staining well with Gram. The last named organism presented the characteristics of the micrococcus tetragenus.

### Constituent Societies

Fort Collins, Colo., Sept. 4, 1907.

The regular meeting of the **Larimer County Medical Society** was held in the City Hall. Those present were: Drs. Upson, Taylor, Purcell, Rew, Kickland, McHugh, Norton, Mozee, Schofield, Hoel, Winslow, Stuver and Miller of Wellington.

The applications for membership of Drs. Rew and Winslow were approved and they were unanimously elected members of the society.

The question of inviting the State Medical Society to meet in Fort Collins in 1909 was discussed and it was unanimously decided to extend the invitation. Dr. Upson was delegated to secure an invitation from the mayor and city council, and Dr. McHugh from the Chamber of Commerce, and it was moved and

carried that both invitations be presented to the State Medical Society at the coming meeting by Dr. McHugh.

A resolution to rescind the action taken by the society last February, on the insertion of professional cards and other forms of advertising in the papers, was made, seconded and freely discussed but, on being put to a vote, was lost. It was moved, seconded and carried that the existing resolution be so amended as to permit new physicians to insert a card in the local papers for one year instead of two months. It was moved, seconded and carried that the secretary send a copy of this resolution to every physician in the city.

The question of filling physicians' prescriptions for alcoholic liquors, the same as prescriptions for other medicines, by the druggists, was freely discussed, and the following resolution adopted:

"That it is the sense or verdict of this society that the druggist should be permitted to fill legally licensed physicians' prescriptions for alcoholic liquors without being required to pay a license for so doing, and that the society hereby requests the city council to remit the license for that purpose."

A committee of three, consisting of Drs. McHugh, Stuver and Upson was appointed to draw up a petition embodying this resolution, have it signed by the physicians of the city and present it to the city council.

An invitation from the Weld County Medical Society for our society to send a representative to attend the annual banquet of their society, to be held in Greeley October 7, was read by the secretary. The invitation was accepted, and Dr. T. C. Taylor chosen to represent the society, and the secretary was directed to notify the Weld County society of the action taken by our society.

Adjourned.

E. STUVER,  
Secretary.

Trinidad, Colo., Sept. 10, 1907.

The regular meeting of the **Las Animas County Medical Society** was held at the office of Dr. T. J. Forhan with the following members present: Drs. Forhan, McClure, Davenport, Jas. G. Espey, Jaffa and Freudenthal. Dr. Forhan reported a case of **lobar pneumonia** developing during the course of typhoid fever, also speaking of its infrequency. The essayist, Dr. T. J. Forhan, then presented a most instructive and thoroughly appreciated paper on small pox, in which he dealt not only of the typical



cases, but also cited many typical cases which developed during the recent epidemic in Las Animas county. The paper was discussed by all present. The society expressed its regret upon the death of Dr. M. Beshoar, he having been its founder and the oldest practitioner in Las Animas county. It was on motion duly seconded and carried decided to levy an assessment of \$1.00 on each member to be used in purchasing a floral tribute. Dr. Jaffa was chosen to present the next paper, the society to meet at his office.

ALFRED FREUDENTHAL, Secretary.

The Boulder County Medical Society was called to order Thursday, September 5, 1907, by the vice-president, Dr. Spencer, with the following members and visitors present: Drs. Wolfer, Henderson, Queal, Gilbert, Cattermole, Reed, Clark, Giffin, Lindsey, Spencer, Shively, Eva Shively Philips, Garwood and Jolley.

The minutes of the last meeting were read and approved.

The paper of the evening, **Rheumatic heart lesions at high altitudes**, was presented by Dr. Cattermole and discussed.

Rheumatism is quite a common disease among children in Colorado. Joint symptoms are not marked. There are often cases in which no joint symptoms have been observed until after the appearance of endocarditis. Tonsillitis, which is a common disease in dry, dusty regions, often precedes or accompanies rheumatism in Colorado. Chorea may accompany or follow rheumatic symptoms. We believe that children are more inclined to show nervous symptoms at high altitudes.

But the chief object of the paper was to discuss the effect of high altitude on rheumatic heart lesions. From the effect in the few cases cited by the writer, and the very limited number of others which he had had an opportunity of studying, high altitude seemed to have but little effect, unless there was dilatation, then the increased amount of work placed on the right side of the heart in the high altitude made it desirable to get the patient into an atmosphere which contains more oxygen. This can be accomplished by administering oxygen or by removing them to a lower altitude. Administering oxygen is an uncertain procedure; it may answer for a time at the crisis of pneumonia, but with a dilated heart it is not very satisfactory. Such patients are kept quiet, given digitalis, strychnine, nitroglycerine and oxygen as needed, a liquid diet and cathartics,

and when possible placed on board a train and sent to a lower altitude. The essayist believed that caution should be taken in sending children who have rheumatism to a high altitude. They should not be sent until it is determined that the heart is in good condition, for it is quite probable that a high altitude is more severe on the cases from outside, than on those who are accustomed to the conditions here in Colorado.

Dr. Giffin reported case of **Ectopic Gestation** seen with Dr. Cattermole. Operation revealed a ruptured sack. Patient recovered. This makes the tenth case seen in six years. One case verified by post mortem, while the balance were operated on with one death. During his previous experience of 27 years he had not recognized a single case.

The names of Drs. Clark and Robert Henderson, Sr., were proposed for membership and referred to the Board of Censors.

An invitation by the Weld County Medical Society to send a representative to their annual meeting was accepted, and Dr. Giffin was elected to be the delegate.

It was voted that two meetings be held each month, beginning with October and ending in April.

W. A. JOLLEY,

Secretary, Pro tempore.

Pueblo, Colo., Oct. 5, 1907.

The **Pueblo County Medical Society** met October 1st. The literary subject under discussion was **Pneumonia**. This subject was treated in the form of a symposium.

The main essayist of the evening, Dr. Dixon of Denver, read a very able article upon surgical complications in pneumonia. The doctor dwelt at some length upon traumatic pneumonia, calling special attention to statistics. The essayist classified by percentages the location of certain wounds which were frequently attended with the disease. It was a very able and scientific effort upon the part of the doctor.

After the regular order of business had been completed the society indulged in a very informal spread. CRUM EPLER, Secretary.

## Other Societies

The first regular meeting, this season, of the **Alumni Medical Society of the Denver and Gross College of Medicine**, was held in the Academy of Medicine Building, September 7, 1907. The

president, Dr. James Stenhouse, called the meeting to order at 8 p. m.

Dr. D. G. Monaghan, the treasurer, read a report showing the condition of the treasury of the society. The evening was devoted to the discussion of the "recent advances in the field of medicine."

Dr. Wm. C. Mitchell discussed the "**Opsonic Theory.**" He spoke of the birth of bacteriology in 1899 and of the experiments carried on with the chicken cholera given by Kitasato; then of the subsequent discoveries of Klebs, Löffler and Koch and their work. The work of Wright, of London, was next taken up. Dr. Mitchell explained the methods used in the laboratories for the treatment of disease by the serum method. **Localized infections** were said to be most satisfactorily treated. **Tuberculous joints** respond well to this method of treatment. **Tuberculosis of the lungs** was not treated at Wright's clinic. Old **tubercular sinuses** were temporarily improved after a course of treatment, but demanded long and continued care to accomplish a permanent cure. The results in the treatment of **acne** were not what had been hoped for. He said the rule was that "the more severe the infection, the smaller the dose given." The average dose given is from 1-1000 to 1-10,000 of a milligram, and the tendency is to diminish the dosage rather than increase it.

Dr. Sewall prefaced his remarks upon the subject by congratulating the society upon the renewed interest shown, and hoped that the members of the Alumni association would be loyal to their society and to their Alma Mater, for if they "stood together" they could be an influential factor in the community. Dr. Sewall then spoke of the **opsonic theory** and said that it was not to be tampered with thoughtlessly because it is a treatment which requires great skill in technique. He said that the smallest weight that can now be measured by the most delicate scales now made is 1-200 of a milligram, and that when it is seen that the average dose is from 1-1,000 to 1-10,000 of a milligram, it will be seen that great care must be taken in computing that very divided dose.

A unanimous vote of thanks was extended to Dr. Mitchell and Dr. Sewall.

Dr. Moleen spoke briefly on **Insanity**, giving a classification of the insane states. He thought it advisable to recognize only the simplest classifications as exalted, depressed, perverted and decline.

Speaking of the new methods employed in

medicine, Dr. F. C. Buchtel spoke of '**suggestive**' therapeutics. Dr. T. E. Carmody spoke of the Wright serum treatment of diseases of the accessory sinuses. Dr. Neuman spoke of **submucous resection** of the deflected nasal septum. Dr. F. E. Estes and Dr. N. A. Johanson reported interesting cases.

Dr. C. E. Cooper next spoke on the **specialties**. He said concerning the general practitioner referring his cases, that if he felt he could give treatment which would benefit the patient as well as that of the specialist, it was unnecessary to refer such cases but where that was not the case, he should refer such cases without hesitancy as the patient was the one to be considered. Dr. Burns believed that one choosing a specialty should have been in general practice for a considerable length of time.

Dr. A. J. Simpson said the general practitioners are the hardest workers in the medical profession, and they will always be with us, as there is much work for them; that the specialties are a great aid in bettering conditions, and through them better courses are given in the medical colleges.

Dr. J. H. Allen said a specialist should be called "one who limits his practice to a certain line of work," and not one who specializes, but who does as much in other lines. Dr. Stover presented the same views. He said it was not necessary after asking consultation to turn that case over to the consultant, but simply get additional information and continue treating the case. Dr. John said the general practitioner spends more time at his work, and is as conscientious and competent as the specialist, but receives smaller compensation.

Dr. Stenhouse said the general practitioner should not abandon general practice for the specialties, but should study along all lines, devoting particular attention to some one line of study, thereby being specially proficient in that line.

Dr. Cooper asked for information concerning the State Medical Convention at Glenwood Springs, and Dr. Burns answered by repeating what had been said at the previous meeting. A special effort was to be made to secure Dr. Chas. Mayo, of Rochester, to address the society upon his return from Glenwood Springs. The society then adjourned and partook of light refreshments. Members present, 38.

ROBERT L. CHARLES,  
Secretary.

## Communications

### Report of the Section on Internal Medicine.

September 26, 1907.

To the State Medical Journal:

The section on "Internal Medicine and Neurology" met at the Hotel Colorado on the last day of the session and was in general an exceedingly interesting session. The attendance at this section was hardly as large as might have been expected—36 being the largest number in attendance at any one time, though probably as many more were in at different times to hear certain papers.

One probable reason for this was the rather general interest of the program of the surgical section and the further fact that some of our most distinguished guests were in attendance at this—the surgical section, and every one was naturally anxious to see as much of them as possible—furthermore, I am inclined to believe that the program was rather too neurological; in fact, the meeting resolved itself toward the latter end into a neurological family circle, the secretary of the section alone remaining of the internists.

The following papers were read and well discussed:

First.—"Chronic Pancreatitis; with Report of a Case," by Dr. Robe of Pueblo. The case followed rather decidedly upon a fall upon the buttocks, but it was questioned whether there was any etiological relationship between this and the disease. The paper dwelt upon the general seriousness, insidiousness and hopelessness of pancreatitis in general, although nothing especially new was offered. Discussed by Doctors Pershing, Taussig, Arneill and Robe.

Second.—"The Value from a Therapeutic Standpoint of Accurate Diagnosis of the Cardiac Lesions," by Dr. Tyndale, of Salt Lake City. Dr. Tyndale was an invited guest. He gave a very valuable paper upon the differentiation of the principal classes of cardiac lesions, their prognostic importance and the necessity for such differentiation. Discussed by Doctors Simon, Gilbert, Skoog, Taussig, Arneill, Kleiner, McGugan, Moleen, Lazelle and Tyndale.

Third.—"Some Opsonic and Bacterial Vaccine Experiences," by Dr. Webb of Colorado Springs. The paper dwelt upon the general phases of the work, and rather emphasized the importance of vaccine therapy over the

opsonic index, with an account of the inaccuracies of the latter. Discussed by Doctors H. Olden, Cattermole, Arneill, Wilson, Webb.

Fourth.—"A Study of the Reflexes in the Insane," by Dr. Skoog, of Pueblo; discussed by Doctors McGugan, Pershing, Oettinger, Lazelle, Moleen and Skoog.

Fifth.—"Melancholia, with Report of a Case," by Dr. Courtney, of Denver. Discussed by Doctors Pershing, McGugan, Lazelle and Courtney.

Sixth.—"Case of Hysterical Mutism, Recurrent Autohypnotic Sleep, Simulated Deafness, Symptomatic Recovery with Development of Hypomania," by Dr. Oettinger of Denver. This was a report of the much discussed sleeping curiosity of the Denver papers recently. Discussed by Doctors Pershing, Moleen, Courtney and Oettinger.

Seventh.—"Diagnostic and Treatment Migraine," by Dr. Pershing of Denver. Discussed by Doctors Moleen, Courtney, Pershing.

The later papers and discussions were very much hurried on account of the time limit having been reached, but on the whole the section was well worth while and helps to bear out the argument for the sectional idea.

O. M. GILBERT.

## Items

The Alumni Association of the Denver and Gross College of Medicine established a precedent in the form of an informal dinner and reunion in connection with the state meeting at Glenwood Springs this year. Around a beautifully decorated table in the palm room of the Hotel Colorado were seated 26 of the members. Dr. T. M. Burns, as toastmaster, called upon Doctors Charles, Stover, Simon, Mead, Webb and others, who made fitting responses. The general sentiment was for the continuance of the meetings during the time of the Annual convention of the State Society and the making of this meeting the annual one of the Alumni Association was suggested. The ladies of the association were represented by Dr. E. A. Mead, who responded in their behalf in well chosen words.

Dr. L. P. Barbour, formerly of Avondale, is now located at Rocky Ford.



**The Rocky Mountain Interstate Medical Association** went out of existence September 17, 1907.

A meeting was called during the convention of the Colorado State Medical Society, and after the regular order of business, it was decided to disband the organization for the present. There were nine members present including the president and corresponding secretary.

Dr. D. P. Mayhew announces the removal of his office to 725 North Cascade Avenue, Colorado Springs, Colorado.

Dr. Frank E. Waxham has returned to Denver and will resume his practice, opening offices in the Jackson Building. We are glad to welcome the doctor back to the state and congratulate him on his improved health.

## New Members

G. S. Vinyard, Woodland Park; C. E. Ruth, Denver.

## Books Received

[All books received will be acknowledged in this column to be recognized by the contributor as the equivalent. Reviews will be made of these volumes according to merit and the interests of our readers.]

**Obstetrics.** A Text-Book for the Use of Students and Practitioners. By J. Whitridge Williams, Professor of Obstetrics, Johns Hopkins University; Obstetrician-in-chief to the Johns Hopkins Hospital; Gynecologist to the Union Protestant Infirmary, Baltimore, Mw. Second Enlarged and Revised Edition, with 16 Plates and 616 Illustrations in the Text.

Cloth, pp. 950. Price, \$6. New York and London: D. Appleton and Company. 1908.

**A Manual of Hygiene and Sanitation.** By Seneca Egbert, M. D., Professor of Hygiene in the Medico-Chirurgical College, Philadelphia. New (fourth) edition, thoroughly revised 12mo. 498 pages, with 93 illustrations. Cloth, \$2.25 net. Lea Brothers & Co., Philadelphia and New York, 1907.

**The Principles and Practice of Modern Surgery.** By Roswell Park, M. D., Professor of Surgery in the University of Buffalo, Buffalo,

N. Y. In one very handsome imperial octavo volume of 1072 pages, with 722 engravings and 60 full-page plates in colors and monochrome. Cloth, \$7.00 net; leather. \$8.00, net. Lea Brothers & Co., Philadelphia and New York, 1907.

## Books Reviewed

**Progressive Medicine, Vol. III, September, 1907.** A quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, 290 pages, with 15 engravings. Per annum, in four cloth-bound volumes, \$9.00; in paper binding, \$6.00, carriage paid to any address. Lea Brothers & Co., Publishers, Philadelphia and New York.

In this, the third number of the year, the Diseases of the Thorax and Its Viscera, including the Heart, Lungs and Blood Vessels, are considered by Dr. Wm. Ewart. This article epitomizes the recent work in tuberculosis. Regarding the practical side of the etiology he states: "If, as held by Nathan Raw, the bovine infection is in reality answerable for all tuberculosis other than pulmonary, then a large proportion, perhaps numerically the greater part, of the scourge as it now prevails could be stopped by an absolute control over the milk, butter, cheese, and all dairy produce."

Dr. William S. Gottheil reviews the recent work in Dermatology and Syphilis. In this we are glad to learn that in the opinion of the author the tendency is "to limit the sphere of the X-rays more and more, and to realize its perils."

An article of over 100 pages is devoted to Obstetrics by Dr. Edward P. Davis.

In the last article Dr. William G. Spiller reviews much of importance with relation to Diseases of the Nervous System. Of special interest is the discussion of the views of Marie and Dejerine on the aphasia. The conclusion of Dr. Weisenburg's study of the situation of lesions causing conjugate deviations of the eye are given in full.

The work throughout is especially interesting as well as in keeping with the remainder of the series.

# COLORADO MEDICINE

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All communications to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are typewritten.

Communications and items of interest are invited from all parts of the state. Death notices, removals, changes of address, etc., are especially desired.

Secretaries of the County Societies are earnestly requested to report their meetings, including the subject matter of the papers presented, and in general, the substance of the discussions.

Marked copies of local newspapers, or clippings, containing matters of interest to the profession will be gratefully acknowledged. The name of the sender should be given.

The journal will be issued on the 15th of each month. All copy must reach the editor not later than the first of the month. Advertisements of proprietary medicines will be accepted provided the preparations advertised have been approved by the Council of Pharmacy and Chemistry of the American Medical Association. Address all communications regarding advertising to

JAMES M. BLAINE, M. D., *Adv. Mgr.*, 3-4 Steele Block, Denver, Colo.

## IMPORTANT NOTICE.

All members of the Colorado State Medical Society are entitled to a copy of this journal each month. Failure to receive the same, and change of address, should be promptly communicated to the editor.

VOL. IV.

DENVER, NOVEMBER, 1901.

No. 11.

## Leading Article

### ADDRESS.

By H. D. NILES, M. D., Salt Lake, Utah.

In these days, intelligent co-operation between individuals, mark each step of human progress. Organization and combination are the key-notes of success in every walk of life. In every great enterprise, from the building of a railroad, to the education of our children; from the government of our nation, to the management of a department store, the great factor of successful achievement are found in a harmonious combination of forces.

The medical profession has been very slow to recognize the value of organized effort, and the inefficiency of individual endeavors, and as a consequence, the history of medicine has been for many years a record of many failures by the great majority, and a few achievements by the small minority. The public mis-

judged our motives, and thought lightly of our efforts to protect them from the ravages of preventable diseases, and the imposition of quackery. We received no encouragement to raise our general standard of education, or to persist in any post-graduate work. Frequently suspected, and often accused of wrong doing, or inefficient action, the general reputation, standing and influence of the profession suffered because the defense of the individual was not strengthened by the united support of all.

A few years ago some of the strongest and best men in our profession attempted, through the American Medical Association, to perfect an organization which should correct these, and many other evils that were the direct outcome of lack of united, well directed effort. These men, and those who joined them were equal to the task, the time was opportune, and today the medical profession of this nation stands with an organization almost completed, that promises more to each individual who is a mem-

ber of his local society than ever before in the history of medicine. The magnitude of this undertaking can be appreciated in a measure, when we realize that approximately 150,000 physicians, together with the numberless local, state and district societies of which they are members, have all been or are to be united into one solid body, having a common purpose, and controlled by a government in which each shall have a voice in the making.

This body has already proved itself a power for good, in the cultivation of a spirit of fraternalism, the raising the standard of medical education (before and after graduation); the passage of sanitary measures, pure food and drug regulations, the abolishment of quackery and in the solution of many important problems of vital interest to the profession and the laity.

By the present provisions of the constitution of the American Medical Association, every member of a county or state society, is eligible to membership in the American Medical Association, provided that such state and county societies endorse and adopt the constitution and by-laws of our national organization. This, as you see, makes the primary local societies responsible to the national for the educational and other qualifications of each member. This brings every member, even the most remote, of every county society, even the weakest, into the closest possible touch with our national organization, and this carries with it the support, encouragement, and protection of the strongest and best organized body of professional men in the world, to every competent ethical practitioner in the United States.

I must not attempt at this time to enumerate the many benefits that are bound to come from this movement, but I cannot refrain from referring to a few of

the particular advantages that it promises to bring to those living in sparsely settled parts of the country, like Utah. Here we need most, not only the kindly co-operation of our nearby friends, and colleagues, but the sympathy and support of our state and national association. Any legislation tending to raise the educational standard of those who essay to treat the sick; any sanitary measures calculated to limit or prevent disease or sickness, must make a stronger appeal to our local and state legislators when they realize that we are not expressing individual and perhaps prejudiced views, but that we are simply and directly voicing the carefully formed consensus of opinion of 150,000 educated, experienced men, the greatest body of scientific men in the world.

The public, even the most unintelligent and the most presumptuous part of it, will learn to trust us as a united body, even though they might be lead to doubt our wisdom or sincerity as individuals.

The increased comfort, satisfaction and sense of usefulness that now may come to country practitioners and others not in close touch with our medical centers, is simply incalculable. Our studies and our efforts to keep abreast of the times, we will now be stimulated to pursue as enthusiastically as in our college days. The reading and discussion of papers is certain to become an influential factor in our progress.

As we become better acquainted with our professional brethren nearby and at a distance, in society meetings and out, we will learn that we are not so very different in our hopes, ambitions and habits of thought; and, while in our professional skill and judgment in particular lines or branches we may vary, it will be found that we are all able to contribute something to the cause of medicine. We only



need to know each other better to be more charitable and kindly.

Now let us consider in detail some of the advantages that this movement is destined to bring to the people of this state. The fact that the educational and ethical requirements necessary to membership are prescribed by the A. M. A. will relieve the local societies of any charge of personal prejudice or favoritism when incompetent or unethical practitioners are debarred from membership or excluded from the local societies. The ultimate effect of this provision will be that every reputable physician will be a member in good standing in his local society; otherwise he will be regarded by the *public*, as well as by the profession, as ineligible—viz., either incompetent or disreputable. Moreover, this evidence of a man's standing will be demanded and used for or against him wherever he may go in the United States. These ethical and educational requirements are upon such a broad, liberal basis that no good, well-meaning, qualified man will ever be excluded from membership, while if there be others, they will look in vain either to the public or the profession for support or sympathy. This means much to each of us, for this badge of membership will soon become a guaranteed assurance of courteous, kindly treatment and attention wherever the possessor thereof may go, from his professional brethren, the public, as well as from the various medical institutions, hospitals, and societies he may choose to visit.

For example, all members of the American Medical Association living in any part of the state will find a cordial welcome should they attend our Salt Lake society meetings, or visit the laboratories and operating rooms of our hospitals, and should their patients find their way to our city, or to our hospitals, we will promise to return them to their

attending physician, more loyal to him than before they came to us. This will doubtless hold true of other institutions throughout this and other states, for we are bound together by fraternal ties, as well as by professional interests, and we who are connected with hospitals *need* you, and you need us, and the patients are often in need of both.

The diagnosis and operative facilities of our hospitals, our X-ray and laboratory rooms are at your disposal. Any instruments we may happen to have are at your command. Should you care to engage in any post-graduate work, either in this city or elsewhere, we may, through our acquaintance or otherwise, be helpful to you. If you need a nurse, wire your desire to us, and we will take particular pains to get, and send you one. If you are perplexed or worried about a case, command us and we will be as helpful as we can.

I remember very well my own experience as a country practitioner, how often I felt the need of some of the advantages that this closer fellowship of today promises to bring. When deprived of all hospital advantages, trained nurses, skilled assistants, available libraries, many instruments, laboratory privileges, and the companionship of professional friends, I was often dissatisfied with my work, and discouraged with my prospects for improvement. One's self reliance, resourcefulness and originality is developed in a country practice, but his inspiration and encouragement to avoid falling into by-paths out of the road of progress, comes from keeping in closer touch with his fellow workers. He needs their companionship, as well as their competition.

Neither I, nor my professional friends ever attended medical society meetings, and consequently we missed that great stimulus to earnest endeavor, that comes

from preparing, reading, or hearing papers, and the interchange of thought that medical discussion elicits. I had a few instruments and books, and I often felt the need of more. We had no hospitals, or trained nurses, or laboratories, and my competitors were slow to volunteer encouragement or consolation, when I was troubled or depressed.

The present reorganization of our profession promises to eliminate, or mitigate these, and many other sources of discomfort, and discouragement that comes to all practitioners, by bringing them into closer fellowship with a larger circle of professional brethren, and into quicker touch with all the advantages, facilities and conveniences offered by the most favored of larger cities.

Great as are these advantages to accrue to the profession of Utah, it is the citizens generally, that will secure the greatest benefits from this movement. For more than they can comprehend or appreciate, the preservation of their health, the prevention and cure of disease, and the mitigation of suffering, depends upon the high character, as well as the technical knowledge and skill of the physicians of the state; and anything which tends to raise the standard of medical education, and elevate the ideas of the profession, must inevitably provide the public with better qualified physicians and counsellors.

In conclusion, gentlemen, let me express my sincere conviction that this present reorganization of the profession marks the beginning of a new era in our progress; an era to be characterized by a closer fellowship, a greater efficiency, more brilliant achievements, and a more complete realization of our hopes, than has been true of any previous period in the history of medicine. Every reputable, qualified physician in Utah, is expected to participate in this great move-

ment, and every good citizen of our state whatever his vocation, is invited to lend his influence in a cause that promises to advance scientific medicine, and minimize human suffering.

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## Editorial Comment

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### *NO PROPRIETARIES FOR SILVER CITY, N. M.*

To Silver City, N. M., a flourishing town of 3,000, belongs the credit of successful co-operation, on the part of the twelve physicians practicing there, in the excluding of proprietary medicines from their prescriptions.

According to Dr. George K. Angle, of that city, who was a recent visitor in Denver, the physicians agreed to familiarize themselves with the preparations of the United States Pharmacopoeia and National Formulary, and to use them exclusively. The doctor remarked incidentally that the druggists did not keep them, and that they could not be procured in the city, and that detail men spent little time there.

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### *HONI SOIT QUI MAL Y PENSE.*

In the October issue of *COLORADO MEDICINE*, there appeared an editorial concerning one Dr. Dunn, a well known quack of Denver who, in exploiting the sale of a mixture called "Uterine Evacuant," attempted to fortify his claims as to the efficacy of the mixture by citing the names of an even two dozen physicians. Out of this number six were from Colorado, and five of these were members of our state society.

The title of the aforesaid editorial, "High Potency Gall," referred merely to the idea of a rank quack trying to sell his wares to legitimate physicians. The

reason for mentioning only five names out of the twenty-four, referred to in the quack circular, was that these five were members of the state society, and therefore amenable to the rules and by-laws of the society, and if the quack had actually sold to these men "frequently," an explanation was due the state society and the physicians to whom this circular had been sent.

Three of the five have written explanations of their innocent purchasing of this mixture and the unauthorized use of their names. One has not replied, and one has written a long reply which, in the opinion of the publication committee, should not be published in this journal. In it he attempts to justify his action by saying: "This may not be my last attempt to learn something from quack sources (which is my own business)." We would beg to remind the doctor that every member of a county society has signed a constitution of which the code of ethics is made a part, and he is therefore amenable to the rules and by-laws of such society. The quoting of his name does not constitute a slander on his reputation, neither was the editorial referred to a "personal attack on a few country doctors." The publication committee has no friends to reward or enemies to punish, but manages the publication of COLORADO MEDICINE (according to its best judgment) for the best interests of an ethical profession. J. M. BLAINE.

It must not be supposed that all tertiary syphilitic troubles can be cured by iodide of potassium. There are some which none of the iodides will even relieve. It will also be found in such cases that the desired results will be brought about by an exhibition of mercury in some form.—*American Journal of Dermatology*.

## Proceedings

### OF THE THIRTY-SEVENTH ANNUAL MEETING OF THE COLORADO STATE MEDICAL SOCIETY

MINUTES OF THE PROCEEDINGS OF THE HOUSE OF DELEGATES.

September 16, 1907.

The meeting was called to order by the president of the society, Dr. H. R. Bull, at 9 p. m.

On motion of Dr. C. K. Fleming, duly seconded, Dr. A. H. Williams was elected secretary *pro tem*.

The roll call showed eleven delegates present.

On motion of Dr. Epler, the reading of the minutes were dispensed with until Tuesday morning.

It was moved by Dr. Kahn that the chairman appoint two members to serve with Dr. Johnson as a Committee on Credentials. The motion was seconded and carried.

The chairman then appointed Dr. Epler, of Pueblo, and Dr. Williams, of Denver, to serve with Dr. Johnson on the Committee on Credentials.

The appended report of the committee was then read and adopted.

It was moved by Dr. Fleming, and seconded, that the reports of officers be made a special order of business for Tuesday morning. Carried.

Moved by Dr. Fleming, and seconded by Dr. Johnson, that the reports of special committees be deferred until Tuesday morning. Carried.

Moved by Dr. Epler, and seconded by Dr. Kahn, that the house proceed to the election of a Nominating Committee. Carried.

Dr. Fleming nominated Dr. Work, of Pueblo; Dr. Work nominated Dr. Fleming, of Denver; Dr. Kahn nominated Dr.



Johnson, of Montrose; Dr. Epler nominated Dr. Scully, of Colorado Springs; Dr. Johnson nominated Dr. Kahn, of Leadville.

Dr. Kahn moved that the nominations be closed, and that the secretary be instructed to cast the ballot of the house for the above nominees as members of the Nominating Committee. The motion was seconded and carried.

On motion the house then adjourned until Tuesday morning, at 8:30 a. m.

September 17, 1907.

The meeting was called to order at 8:30 a. m. by the president, Dr. Bull.

The secretary, Dr. Black, called the roll, and there were twenty-six delegates present.

The minutes of the previous meeting were then read, and, on motion of Dr. Blaine, approved.

The secretary then presented his annual report, as follows:

#### REPORT OF SECRETARY.

During the past year the following communications have been received, which I now beg to present. *Exhibit A*, is a letter from Dr. N. P. Colwell, secretary Council on Medical Education of the A. M. A., calling attention to the importance of our Committee on Medical Education, and of a representative of that committee being present at the annual conference and asking that the expenses of this representative be paid.

*Exhibit B* is a letter from Dr. L. W. Littig of Iowa, with a copy of resolutions adopted by the Iowa State Medical Society relative to the organization of a committee for Medical Defense in malpractice suits.

*Exhibit C*. A letter from Dr. E. S. Goodhue of Hawaii, asking for an offi-

cial connection between our society and the Hawaiian Anti-Tuberculosis League.

*Exhibit D*. A letter from President H. R. Bull appointing Dr. S. D. Van Meter as representative of our society to the National Legislative Council at Washington, D. C.

*Exhibit E*. Letter from Dr. J. N. McCormack, enclosing report of A. M. A. committee on insurance.

*Exhibit F*. A letter from Dr. McCormack enclosing constitution and by-laws for branch associations.

*Exhibit G*. A letter from U. Underhill, Secretary of the Colorado Railway Association, granting a one-fare rate on all roads for round trip to Glenwood Springs meeting.

Some confusion occurred owing to ambiguity of our by-laws in regard to Chapter XII, Section 7. The Weld County Medical Society asked for a ruling. The section was construed to mean that a member in good standing in one of our constituent societies applying for membership in another by transfer should be accepted without ballot. This section should be amended to read more clearly on this point.

I take pleasure in presenting the application of Clear Creek County Medical Association for a charter. The society is composed of seventeen members with dues full paid for 1907. It has complied with our requirements by submitting its constitution and by-laws, which are signed in due form by its members.

In accordance with the instructions of this body I mailed to physicians not members of constituent societies a circular letter inviting them to join (see *Exhibit I*), with the exception of Denver. I mailed such letters only to physicians reported eligible in the annual reports of secretaries of constituent societies. The secretary of the society of the City and County of Denver does not report upon

physicians who are not members. It was difficult, therefore, to eliminate all the objectionable names from the list, and in consequence some errors were made. The result of these letters was a very marked increase in membership throughout the societies of the state.

You will observe in the treasurer's report that \$132.00 back dues have been collected. This was due to the adoption of an amendment to the by-laws pertaining to lapsed dues.

At the last meeting of the House of Delegates a number of matters were referred to the Committee on Legislation, which this committee failed to report upon. Upon motion of Dr. Jackson the unfinished work was referred to the present Committee on Legislation.

I endeavored to have the physicians of Prowers county organize a society and learned that the organization was per-

fected, but have not yet received an application for charter.

Since the death of our treasurer, Dr. S. E. Solly, I have performed the duties of his office, and my report as secretary upon money received will be incorporated in my report as treasurer.

Respectfully submitted,

MELVILLE BLACK,  
Secretary.

Denver, Colo., Sept. 16, 1907.

Dr. Blaine moved that a committee be appointed to look over the exhibits presented by the secretary.

The motion was seconded and carried.

The chairman appointed Drs. Blaine, Little and Coover to constitute such committee.

The secretary then read the treasurer's report, as follows:

### REPORT OF TREASURER.

#### RECEIPTS.

Cash on hand from last year.....\$1,659.28

#### BACK DUES FROM SUSPENDED MEMBERS.

Oct.	12	El Paso County, 1 member.....	3.00	
Oct.	20	Pueblo County, 1 member.....	3.00	
Nov.	10	Montrose County, 1 member.....	3.00	
Nov.	17	Denver County, 10 members.....	30.00	
Nov.	21	Otero County, 1 member.....	3.00	
Dec.	28	Mesa County, 5 members.....	15.00	
Feb.	4	Teller County, 23 members.....	69.00	
Feb.	8	Garfield County, 1 member.....	3.00	
March	4	Montrose County, 1 member.....	3.00	\$ 132.00

#### RECEIPTS FROM COLORADO MEDICINE.

Dec.	3	Advertising .....	48.00	
Jan.	19	Advertising .....	84.45	
Feb.	8	Advertising .....	101.08	
July	15	Advertising .....	38.25	
Aug.	9	Advertising .....	75.00	
Feb.	1	Subscription by Dr. Mark White..	2.00	
Feb.	8	Two copies sold.....	40	
Sept.	11	Advertising .....	53.25	\$ 402.43

## DUES FOR 1907.

Feb.	4	Clear Creek County, 17 members .	\$ 51.00		
July	5	Otero County, 17 members.....	51.00		
Aug.	12	Mesa County, 16 members.....	48.00		
Aug.	19	Boulder County, 38 members.....	114.00		
Aug.	20	San Luis Valley, 21 members.....	63.00		
Aug.	20	Garfield County, 19 members ....	57.00		
Aug.	26	Lake County, 23 members.....	69.00		
Aug.	26	Ouray County, 8 members.....	24.00		
Aug.	29	Northeast Colo., 9 members.....	27.00		
Aug.	29	Las Animas County, 27 mems ....	81.00		
Aug.	29	San Juan-La Plata, 3 mems ....	9.00		
Sept.	1	Montrose County, 10 members ....	30.00		
Sept.	5	Weld County, 34 members.....	102.00		
Sept.	6	Larimer County, 23 members.....	69.00		
Sept.	..	Fremont County, 23 members.....	69.00		
Sept.	..	Eastern Colorado, 13 members ....	39.00		
Sept.	9	Delta County, 12 members.....	36.00		
Sept.	11	El Paso County, 55 members.....	165.00		
Sept.	11	Pueblo County, 45 members.....	135.00		
Sept.	11	City and Co. of Denver, 266 .....	798.00		
Sept.	16	Teller County, 14 members.....	42.00	\$2,079.00	\$2,613.43
Membership, 693. Total Receipts.....					\$4,272.71

## DISBURSEMENTS.

## Journal Maintenance:

1906.

Nov. 5,	Reed Publishing Co.....	\$ 100.16
Nov. 28,	Reed Publishing Co.....	118.45
Dec. 19,	Reed Publishing Co.....	116.11

1907.

Jan. 26,	Reed Publishing Co.....	152.65
Feb. 19,	Reed Publishing Co.....	135.73
March 19,	Reed Publishing Co.....	141.42
April 20,	Reed Publishing Co.....	120.62
May 24,	Reed Publishing Co.....	161.25
June 26,	Reed Publishing Co.....	143.09
July 29,	Reed Publishing Co.....	141.59
Aug. 31,	Reed Publishing Co.....	146.88
Sept. 14,	Reed Publishing Co.....	133.70
Sept. 11,	Geo. A. Moleen, editor, salary.....	300.00
		\$1,911.65



## EXPENSES OF LAST MEETING.

Oct. 10, Curran Bill Posting Co.....	\$ 5.25	
Oct. 30, Wm. Whitford, stenographer.....	188.00	
Oct. 24, Expenses of Dr. R. C. Cabot.....	139.00	
Nov. 2, Reed Publishing Co.....	69.55	
Nov. 3, Mable Anderson, stenographer.....	5.00	
Nov. 3, Anna Rand, stenographer.....	17.60	
Nov. 3, Mable Harding.....	22.25	\$ 446.65

## GENERAL EXPENSES.

Nov. 3, Miss Stearne, circular letters.....	6.50	
Jan. 7, '07, Reed Pub. Co, stationery.....	5.75	
Jan. 27, A. M. A. Report Blanks.....	2.60	
Aug. 31, Reed Pub. Co., program.....	55.71	
Bank rate on collections.....	2.50	
Sept. 13, Secretary's salary and incidentals ...	200.00	\$ 273.06
Total Disbursements.....		\$2,631.36
Cash Balance.....		\$1,641.35

Respectfully Submitted,

MELVILLE BLACK, Treasurer.

On motion the treasurer's report was referred to the Auditing Committee.

The secretary then read the report of the Committee on Scientific Work, as follows:

## REPORT OF THE COMMITTEE ON SCIENTIFIC WORK.

We beg to present the complete program of the scientific work contributed for this session. We have followed the plan of last year with regard to society representation in the general session, and volunteer papers in the sections. With the exception of a few representatives who were chosen by their local societies to read papers, all have responded. We feel to be thus chosen is an evidence of the highest honor a local society can bestow upon a member, and that it should be so regarded by the members so chosen. We also feel that a society should not confer this honor lightly, but that

the representative should be chosen with the greatest care.

Dr. William J. Mayo, who was to have been our guest of honor, found it necessary to decline in favor of his able confreres, Dr. Charles H. Mayo and Dr. L. B. Wilson. We bespeak for them a most cordial welcome.

Our guests from Salt Lake, Utah, Dr. H. D. Niles, president of the Utah State Medical Association, and Dr. William R. Tyndale, have contributed papers to the section program upon our invitation.

Respectfully submitted,

MELVILLE BLACK,  
WALTER A. JAYNE,  
JAMES RAE ARNEILL,  
Committee.

The report of the committee was adopted.

The secretary then read the report of the Committee on Printing the Constitution and By-Laws, as follows:

REPORT OF THE COMMITTEE APPOINTED  
LAST YEAR TO PRINT THE CONSTITU-  
TION AND BY-LAWS.

We beg to report that we have not had the constitution and by-laws reprinted for the reason that, upon looking it over, it was found that there was no provision in it for the new committee on Medical Education, and that several other important changes in the by-laws would no doubt be made at this session. We, therefore, concluded to wait until these changes had been made before performing the duty assigned us.

Respectfully submitted,

MELVILLE BLACK,

WALTER A. JAYNE,

Committee.

Moved by Dr. Kahn that the recommendations of the Committee on Printing the Constitution and By-Laws be accepted as read, and that the committee be continued, to report at this session.

The motion was seconded by Dr. Stuver. Carried.

Dr George A. Moleen then read the following report, as editor of COLORADO MEDICINE:

*To the House of Delegates, Colorado State Medical Society:*

Your editor having had in charge the issuing of COLORADO MEDICINE under the direction of the Publication Committee for the fiscal year just ended, begs to report as follows:

There have been published twelve issues during the year (including the last or September number), in which there has been an aggregate of 408 pages of reading matter. (1906, 357 pages, increase, 36 per cent.)

At the last meeting this body expressed a desire that the journal be increased in matter and scope. Believing

that a department devoted to reviews and abstracts of important articles of the month would add to the value of the journal to the majority, a number of collaborators were appointed, with the approval of the committee, to whom credit is due for the splendid work done in this department.

Previous to January, 1906, the journal was conducted on a 32-page basis, and the review work has been confined to about eight pages, making an increase of 25 per cent in its size.

The secretaries of constituent societies have been creditably prompt in furnishing excellent reports of their meetings, which fact also accounts for the further increase in the number of pages.

It is due the House to know that we were forced to decline much good material, including volunteered original articles, abstracts of national society meetings, resolutions, etc., on account of the limited space. This is mentioned, however, as much to indicate the recognition our state journal is receiving, as to indicate our limited space.

There were presented at the last meeting and published forty-one papers, most of which were submitted with discussions. This large number and the length of some of the papers and discussions necessitated the issuing of larger editions. We were forced to publish all of these by the time of this meeting in order to have them appear in the transactions, which it was hoped to have ready prior to this meeting. There were but two articles accepted outside of the papers of the last meeting.

The expense of this committee is therefore greater than that of previous years. The cost of the journal, by the month, including printing, binding, cover, wrapping, addressing, distribution, etc., was as follows:

1906 October .....	\$100.16
November .....	118.45
December .....	116.11
1907 January .....	152.65
February .....	135.73
March .....	141.42
April .....	120.62
May .....	161.25
June .....	143.09
July .....	141.59
August .....	146.88
September .....	133.70

Total .....	\$1,611.65
Salary of the editor.....	\$ 300.00

Total for publication of the journal.....	\$1,911.65
Total of year previous..	\$1,648.29

Increase over 1906.....	\$ 262.36
Or 16 per cent.	

#### ASSETS—

Advertising account .....	\$ 837.48
Members' assessments at \$2 per year .....	1,386.00
Value of books received for re- view, the property of the so- ciety and in the custody of the Academy of Medicine.....	158.00
	<hr/>
	\$2,381.48

Cost of printing and binding the annual transactions.....	\$ 336.00
Express on same (estimated) ..	100.00

The journal is the natural successor of the time-worn transactions which, it is evident to many, are an expense imposed upon the treasury of the society for the satisfaction of a limited few of the membership who desire them published. The year's volume of the journal can be bound at a cost not to exceed \$1.00, and will then contain much which cannot be incorporated in the transactions. It is unnecessary to add

that your Publication Committee is un-  
animously opposed to this seemingly un-  
necessary great expense.

The by-laws relating to the Publica-  
tion Committee should be more explicit  
regarding duties and the conduct of its  
affairs not left so much to precedent.

It would add considerably to the econ-  
omy and facility of matters if the secre-  
tary of the society were made editor by  
election in this body, or at least the edi-  
tor made an elective office by the House  
of Delegates and the Publication Com-  
mittee to stand as an advisory committee.

Respectfully submitted,

GEORGE A. MOLEEN,  
Editor.

Dr. Black moved that a committee of  
three be appointed to consider the rec-  
ommendations of Dr. Moleen in his re-  
port as editor of COLORADO MEDICINE.

The motion was seconded and carried.

The chairman then appointed Drs.  
Work, Fleming and Taussig to serve as  
such committee.

Dr. J. M. Blaine then submitted the  
following report as advertising manager  
of COLORADO MEDICINE:

#### REPORT OF THE ADVERTISING MANAGER, COLORADO MEDICINE.

##### RECEIPTS—

Collections for advertising, Jan- uary to October, 1906.....	\$267.65
Commissions deducted.....	66.16

Total, net .....	\$201.49
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For the year ending October, 1907, cash received.....	\$467.80
Commission and expense.....	\$115.77

Total, net .....	\$352.03
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##### DISBURSEMENTS—

To S. E. Solly, treasurer.....	\$ 69.50
To Melville Black, treasurer.....	484.03



The resources to October 1, 1907, are as follows:

Cash on hand.....	\$103.00
Amount owing and due for advertising .....	\$266.68
Gross amount collected.....	\$467.80
	<hr/>
	\$837.48

Respectfully submitted,

J. M. BLAINE,  
Advertising Manager.

It was moved by Dr. Black that the report be referred to the Auditing Committee. The motion was seconded and carried.

Dr. Blaine then explained that during the past year the question of absorbing the *Colorado Medical Journal* had been considered. Mr. Reed, who formerly owned the *Journal*, had died and Mrs. Reed had offered to turn the business over to COLORADO MEDICINE in consideration of the cancellation of an obligation incurred in the nature of advertising which had already been paid for. The recommendation of the committee would be that Mrs. Reed be paid \$103.00, which would enable her to repay the amount of money that had been collected in advance for advertising.

Dr. Black moved that the matter be referred to the committee having charge of the editor's report. The motion was seconded and carried.

Dr. Crum Epler then read the report of the Committee on Public Policy and Legislation, as follows:

#### COMMITTEE ON PUBLIC POLICY AND LEGISLATION.

Report of Chairman, September, 1907.  
House of Delegates, Colorado State Medical Society:

Ladies and Gentlemen—Once more I have the honor to submit my report as

chairman of the Committee on Public Policy and Legislation concerning our labors during the past year.

Taking into consideration the vital importance of the many problems entrusted to our committee, the differences we encounter and the friends (?) we make in attempting to accomplish something for the Dear Public (notwithstanding we know beforehand that we are sure to be looked upon as representatives of a heartless monopoly), it is to be hoped that your Honorable Board will not think my report of unnecessary length.

#### THE PURE FOOD AND DRUG LAW.

The most important problem of the year in a legislative way that required our attention was the necessity of securing the enactment of a pure food and drug law along the lines of the national act. In this work it is a pleasure to say that contrary to the usual condition of matters pertaining to medical legislation, we were not alone in the fight, in fact we were helpers more than leaders; but those in immediate charge of the bill as it passed the dangerous rocks of the house and senate will give us credit for good and effective work.

Dr. Hugh L. Taylor, secretary of Board of Health, and the Hon. Mr. H. E. Kelly, father of the bill, were indefatigable in their efforts in securing the passage of the measure, and to those gentlemen the advocates of pure food legislation are greatly indebted.

In our opinion it is one of the best laws of its kind to be found on the statute books of any state, and is sure to do much good in the prevention of drug and food adulteration. Its effectiveness, however, depends to a great extent upon its administration, which in turn depends upon the personnel of the board of administration.

The enforcement of this law, as you are all well aware, was placed in the hands of the Board of Health, which, constituted as it is, insures competent and effective administration, provided adequate financial appropriations be at their command.

But it is well at this time to call attention to the danger that the opposition may secure changes in the personnel of the board which would result in defeating the essential objects and purposes of the law.

It is therefore not amiss to recommend to you as the representatives of the medical profession of the state, that you give your undivided support to the present Board of Health in its administration of this act, and in due time see that liberal appropriations for the use of the board are made, and use every effort towards securing the appointment of men of high character with qualifications calculated to insure the perpetuation of the policy of the present board. Especially is it important that the secretary, upon whose shoulders the burden chiefly falls, should be given the loyal support of every doctor in the state.

The medical profession naturally is disposed to accept nothing without investigation and proof, but frequently they go too far and condemn without considering the whys and wherefores. They cannot be too particular in cases where condemnation concerns a public officer, when such officer is a member of the medical profession, for censure emanating from our own ranks is accepted by the laity as indisputable proof.

#### HOUSE BILL NO. 150.

A statute enacted by the last Colorado Assembly, which unquestionably meets with the approval of our profession individually and collectively, is known as H. B. No. 150, by Mr. Kelly. Again, we

are indebted to that gentleman for securing the passage of another worthy measure. It prohibits advertisements of all private diseases. It is a strong measure, well drawn, and means the abolition within this state of this not only unnecessary but disgusting class of medical advertising. It applies to the newspapers as well as those back of the advertising; consequently it reaches also those who advertise in Colorado but reside elsewhere—a class our medical law could never reach. Public interest should be aroused in the strict enforcement of this act.

#### THE LUNACY LAW.

The inefficiency of our existing statute governing the commitment of the insane is and has been for a long time recognized by the laity and the profession. With the hope that such inefficiency might be remedied, our committee secured the aid of the leading alienists of the state in preparing a bill which would have been a great improvement over our present law. Realizing the opposition certain to develop if this bill were fathered by a committee composed of medical men, we had it introduced as a State Board of Charities and Corrections measure. The absolute impossibility of pushing so commendable a bill was a sore disappointment, and unexplainable, but should not discourage future efforts.

#### HOUSE BILL NO. 310.—HOSPITAL BILL.

A measure which suffered the fate of the foregoing bill was H. B. No. 310 for the regulation of hospitals, lying-in institutes, etc. It was carefully prepared and calculated to do great good in abolishing the pseudo-hospital and abortion shops, without interfering in the least with the legitimate institutions. The incoming committee would do well to have it reintroduced in the next legislature.

and perhaps may be more successful than the present.

HOUSE BILL NO. 405.—MEDICAL BILL.

It is mortifying to be compelled, like a certain English general in the late Boer war, to say, "I regret to report another defeat" in the fight to eliminate the buncombe forced into the medical law by the opposition two years ago.

Especially is this true when everything seemed so propitious. All I can say is, "things are not always what they seem," and if there ever was an unknown, uncertain entity it is a state assembly. Of the several with which I have had intimate acquaintance, the sixteenth was peculiar to itself, and while the majority were inclined to favor decent medical legislation, there were a few high in power so opposed to anything pro-medical that it did not take us long to see that it was useless to expect the enactment of any measure bearing the stamp of the medical profession. This influence was so strong as even to dominate the actions of the medical representative whom we had selected as standard bearer—a most disappointing situation I assure you.

Further, the necessity of opposing Senate Bill No. 268, introduced through the efforts of our friends from Weld county, while easily disposed of, was, to say the least, very disastrous to the success of the efforts of our committee. It naturally created the impression in the minds of the members of the legislature that the medical profession was divided and could not agree upon what changes should be made in the medical law and gave the opportunity for the members of the Assembly to say, until the medical profession did present a united front the law should remain unchanged.

In this connection I would urge upon your honorable body to counsel the con-

stituent bodies as to the error of opposing any regularly appointed committee of the State Society in its various efforts.

Committee work is at best no easy thing, and particularly is this true of the labors of the Committee on Public Policy and Legislation. What we most need is the loyal support of the organized profession, which I am sorry to say is too frequently so feeble as not to be preceptible. But even so, it is better than to have added to the expected strong and unprincipled opposition—represented by the horde of charlatans and the newspapers—opposition from a regularly organized medical society.

Through unjust criticism of our present medical license law by some disgruntled members, the idea that it is inefficient and behind the times, and of no value, has been created in the minds of a number of members of the profession at home and abroad. Having served as executive officer of the Board of Medical Examiners for a little over six years, I wish to emphatically state that this idea is totally erroneous; that, while the present law is not all that it could be, it is one of the best in the country, and far superior to many thought to be exceptional. Lest this opinion be deemed biased by personal pride in its enactment, I would respectfully refer those who may feel inclined to such a conclusion, to the National Committee on Legislation, or the report of the committee appointed to investigate the working of the law by the Denver County Society; or, what would perhaps be more satisfactory, to anyone especially interested I would recommend a careful examination of the work done by the board under the new law, as compared with the twenty-four years under the old law. To all so inclined a cordial invitation is extended.



## NATIONAL MEDICAL LEGISLATIVE COUNCIL.

Your president honored me with the appointment as delegate to the meeting of the National Medical Legislative Council, which convened in Washington, D. C., last December. Coming at such season of the year, it is difficult to get away from professional work, but I cannot urge too strongly that the delegate of this state society to this conference should not fail to attend. The great good accomplished by the council is already that of which the medical profession may well feel proud. The transactions are most beneficial to all interested in legislative work, and cannot fail to give one a better insight into the important principles underlying medical legislation in general, to say nothing of the enthusiasm to be derived from contact with the members of the National Committee. Especially is the latter true of the gifted and phenomenal chairman of that body, Dr. C. A. L. Reed, whose rare accomplishments and genius render him equal to any occasion. In this hour of the presidential possibilities, his party could not choose a better or more able standard bearer for the highest office of the land.

It is a great pleasure to report that the committee (of which I had the honor to be a member) appointed by the council to try to see that justice is done to the late Dr. Jesse Lazear and Dr. James Carroll, the real heroes of the yellow fever commission, and to whom the world owes a debt of gratitude of inestimable magnitude, was successful in securing recognition on the part of congress of the noble work done by these men, one of whom—as you know—lost his life, and the other his health, that their fellowmen might know the cause of yellow fever and control its ravages.

In the case of Dr. Carroll, congress passed a bill promoting him to the rank of major, with a corresponding increase of salary. This, while much to the modest, appreciative gentleman, Dr. Carroll, who performed his heroic work with no other expectation of reward than that of a true scientist, is in reality so small on the part of a great country such as ours as compared with the magnitude of the service rendered that it should make every citizen of the United States blush with shame when he reflects upon it. It would seem that our country is ready and willing and quick to reward heroism in the army, frequently more accidental than premeditated—the result of the excitement of the hour—but slow to see and appreciate such acts as that performed by Carroll and Lazear. Although executed in quiet wards of the Cuban Yellow Fever hospital, with no roar of canon or martial music to spur them on, were they any the less brave than the officer who, in the din and excitement of battle, leads his command on to victory?

Dr. Carroll has at least the satisfaction of knowing that the medical profession honors and will remember in perpetuity the names of Carroll and Lazear. The most that can be expected in the case of Dr. Lazear is a liberal pension for his widow and children. Up to date our great and benevolent government has shown its appreciation of the services rendered by that hero who lost his life that thousands might be saved, in the large and magnificent pension of \$17 per month to the widow. We are in hopes—in fact, confident—that the next congress will increase it to a sum consistent with the needs of her station and rank. Every medical organization of the country should make it a point immediately to take steps towards a united effort to bring influence to bear

upon their representatives and senators in behalf of this bill now pending.

#### CONCLUSION AND GENERAL SUGGESTIONS.

Pardon my repetition of the suggestion that much good can be accomplished by the establishment of a medical editorial bureau whose duty it shall be to furnish the lay press at regular intervals with articles on medical subjects of interest to the public, and of which they are anxious to be correctly informed. Such a plan would prevent the publication of the continually occurring, garbled and ridiculous medical articles which we are called upon repeatedly to explain. Further, it would correctly educate the public on matters medical and restore confidence and respect in the minds of many who now unjustly condemn the profession.

With the fullest appreciation of the conscientious and loyal assistance given me by Drs. Cattermole and Epler, I would suggest and recommend that all members of the Legislative Committee be residents of Denver. It is frequently very hard for a busy doctor to give his time to committee work at a time when most needed at home, and when it is necessary for him to leave his practice it is almost too much to expect. Thus the work of the committee devolves upon the Denver members, which means lessened efficiency and lessened results.

Further, I would recommend that the committee should be arranged so that one member should be appointed every two years. This would insure new timber and at the same time enable the committee to profit by the experience of the two hold-over members, one of whom must of necessity have been through one, and the other two, legislatures.

Further, I would respectfully call your attention to the necessity of making an

annual appropriation for the use of the committee. This on legislative years, should be double the amount of intervening years. It is not right to expect the committee to advance the necessary funds; and wait a year for reimbursement. During the past year I have personally advanced the sum of \$197.80, as per the attached statement.

Trusting that, while our committee has not accomplished anything very great, our work will meet with your approval, I am, Yours respectfully,

S. D. VAN METER,  
Chairman of the Committee on Public Policy and Legislation.

Dr. Black moved that the report be accepted and filed, and that the recommendations therein be referred to the Committee to Revise the By-Laws. The motion was seconded and carried.

Dr. Call stated that Weld county had not in any manner opposed Bill No. 268, and that if the report of the committee were adopted a mistake would be made.

Dr. Kahn moved that two other members of the Auditing Committee be appointed by the chairman on account of the absence of Drs. Carrier and Perkins. The motion was seconded and carried.

The chairman appointed Drs. Little and Stuver to act with Dr. Kahn as the Auditing Committee.

Dr. Jackson then submitted the following report in regard to bringing the state societies of the Rocky Mountain region into closer relationship:

The Committee on the Bringing of State Medical Societies of the Rocky Mountain Region into closer relation, or into organized association, find little disposition to form a Rocky Mountain branch of the American Medical Association in the immediate future. As ways of bringing these societies in closer touch, one with another, they recommend:

1. The appointment of, each year, by the president, at his convenience, two or more members to visit each of the following state societies: Utah, Wyoming, Montana and New Mexico; and the invitation of such visitors from these societies.

2. That the Publication Committee be instructed to endeavor to secure in each of the states in question correspondents who will keep members of this society informed as to the doings of their respective societies through the columns of COLORADO MEDICINE, and to invite from such state societies co-operation, or that they combine with this society to conduct a medical journal that should be the organ of the profession for the whole Rocky Mountain region.

3. That when questions arise of important interest to the profession of the Rocky Mountain states, the delegates to the American Medical Association from any of these states be empowered to call a meeting at the time and place for meeting of the American Medical Association, of all members from these states in attendance upon the American Medical Association, for the discussion of such questions.

EDWARD JACKSON,  
Chairman.  
C. K. FLEMING,  
HERBERT A. BLACK.

On motion the house then adjourned until Wednesday, September 18, 1907, at 8:30 a. m.

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September 18, 1907.

The meeting was called to order by the president of the society at 8:30 a. m.

The minutes of the previous meeting were read and approved.

The secretary then called the roll; 27 delegates were present.

Dr. Epler stated that the report of the Committee on Public Policy and Legislation had not been signed by the committee, and on the suggestion of the chairman, the report was referred back to the committee for their signatures.

On motion of Dr. Black, the report submitted by Dr. Jackson at the previous session of the house, was then considered in sections.

The first section was read by Dr. Jackson, and on motion of Dr. Chipman, seconded by Dr. Black, was adopted.

The second section was then read by Dr. Jackson, and Dr. Epler moved that the first part of the section, referring to the obtaining of correspondence, etc., be adopted, and that the latter part of the section be rejected. The motion was seconded and carried.

Dr. Jackson then read the third section of the report, and on motion of Dr. Stuver the section was adopted.

Dr. Blaine, chairman of the Committee on the Secretary's Report, then submitted the report of the committee, as follows:

#### REPORT OF COMMITTEE ON EXHIBITS.

*Report on Exhibit A.* While we approve of the work and aims of the council on Medical Education of the American Medical Association, and hope that our society may be represented, we feel unable, by reason of lack of funds, to recommend the payment of the expenses of a delegate to the annual meetings of said council.

*Exhibit B.* We recommend that at present no action be taken.

*Exhibit C.* We would recommend that the secretary ask for more specific information and data.

*Exhibit D.* On account of the financial condition of the society we would recommend that no action be taken at present.



*Exhibit E.* We are heartily in accord with these recommendations, but believe the resolutions adopted by the house last year fully covers the ground.

*Exhibit F.* We are opposed to multiplying societies, believing such efforts had better be directed toward making existing societies more effective.

*Exhibit G.* Requires no action.

We also recommend that a charter be issued to the Clear Creek Medical Society.

J. M. BLAINE, Chairman.

W. T. LITTLE,

D. H. COOVER, *Committee.*

On motion of Dr. Carl Johnson, the recommendations of the committee were adopted.

Dr. Kahn then submitted the report of the Auditing Committee, as follows:

#### REPORT OF AUDITING COMMITTEE.

We have audited the report of the Treasurer, and find the same correct.

We have audited the report of Dr. Blaine, and find it correct.

We recommend that the bill of Dr. Van Meter, chairman of the Committee on Public Policy and Legislation, of \$69.50, for printing and postage of campaign literature, stenographic work and postage be allowed.

We also recommend that the bill of Dr. George A. Moleen, of \$6.00, for postage expended as editor of COLORADO MEDICINE, be allowed.

Respectfully submitted,

SOL. G. KAHN, Chairman.

W. T. LITTLE.

E. STUVER.

On motion of Dr. Jackson, the report of the Auditing Committee was adopted.

The report of the Committee on By-Laws was then read by the secretary, and acted upon in sections.

Dr. Jackson moved that the clause, "and his expenses shall be paid from the treasury of the society," be stricken from the first section.

The motion was seconded, and after discussion by Drs. Black, Kahn and Jackson, was carried.

On motion of Dr. Jackson, the remaining portion of the section was adopted.

The secretary then read Chapter 12, Section 7, as amended by the committee.

Dr. Finney moved that following the word "cost," there should be added the following clause: "subject to the approval of the society he seeks to enter."

The motion was seconded and carried.

The secretary then read chapter 10, Section 4, as amended by the committee.

On motion of Dr. Chipman the amendment was adopted.

The secretary then read Chapter 10, Section 5, as amended. by the committee.

On motion of Dr. Kahn, the amendment was rejected.

Dr. C. H. Call, chairman of the Committee on Necrology, then read the report of the committee, as follows:

#### REPORT OF COMMITTEE ON NECROLOGY.

L. F. Ingersoll, M. D., born about 1855. Died, December, 1906. Graduated from University of Michigan. Came to Grand Junction about 1883, where he remained in active practice until his death.

He had a large practice, and was always active in society work, being the first president of the Mesa County Medical Society. He was surgeon for the D. & R. G., R. G. W. and Colorado Midland railways. He was, at different times, county and city physician.

He gave freely of his services to the poor, and was beloved by a large circle of friends and patients.

Since our last meeting, a little less than a year ago, that great mystery, death, has

taken away from us eight members and fellow workers.

Of these, one had a reputation world-wide—Dr. Samuel E. Solly, treasurer of our Medical Society at the time of his death.

Having weak lungs himself, he devoted his life work to a study of the nose, throat and lungs, and that hewed the path to his wonderful and definite knowledge of climatology, no one ever having surpassed him.

Dr. Solly was but 62 when his death occurred, November 18, 1906, at Ashville, N. C.

Concerning the others your committee is unable to say one word from personal knowledge, but as probably there is no profession in which a death affects so many people as does that of a physician, you know that short as is the following list of names, it doubtless brought sorrow to the homes of many hundred people.

J. L. Edwards, Florence, Fremont County, died August 25, 1906.

W. W. Robinson, Loveland, Larimer County, died September 27, 1906.

L. F. Ingersoll, Grand Junction, Mesa County, died December 8, 1906.

J. C. Ray, Denver, Denver County, died March 5, 1907.

J. G. Keith, Leadville, Lake County, died August, 1907.

F. L. Estill, Colorado Springs, El Paso County, died July, 1907.

Dr. M. Beshoar, Trinidad, died September 5, 1907.

CHARLES H. CALL,  
Chairman Necrology Committee.

On motion of Dr. Carl Johnson, a committee consisting of Drs. Call, Espey and Mayhew was appointed by the chairman to draft suitable resolutions on the death of Dr. Beshoar.

Dr. Moleen moved that the delegates report to their constituent societies the

desire on the part of the House of Delegates for more complete details regarding changes of addresses, deaths, etc., to the secretary of the state society.

The motion was seconded and carried.

Dr. Hubert Work, chairman of the committee, then submitted the following report of the Committee on Nominations:

#### REPORT OF THE COMMITTEE ON NOMINATIONS.

Nominations—For President: H. B. Whitney, S. D. Hopkins, of Denver.

For Vice Presidents: First, W. H. Swan, Colorado Springs; Second, W. P. Harlow, Boulder; Third, W. W. Crook, Glenwood Springs.

For Treasurer (to fill the unexpired term), George W. Meil, Denver.

For Councillors: Second District, Robert Levy, Denver; Third District, J. J. Pattee, Pueblo.

For Delegates to American Medical Association, Crum Epler, Pueblo.

For Alternate, John R. Espey, Trinidad.

For Member Committee on Publication, J. M. Blaine, Denver.

Place of Meeting, Denver.

On motion of Dr. Black the report was accepted.

On motion, an adjournment was then taken until Thursday, at 8:30 a. m.

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September, 19, 1907.

The meeting was called to order by the president of the society at 8:30 a. m.

The secretary called the roll, showing twenty-one delegates present.

The minutes of the previous meeting were read and approved.

The report of the committee to draft memorial on the death of Dr. Beshoar was presented by Dr. Call, as follows:

Dr. Michael Bershoar died at Trinidad, September 5, 1907, leaving a large

circle of sincere friends to mourn his loss. As he had practiced medicine in Colorado since 1866, he was easily the oldest member in the state in years of continuous practice. He had been honored with office by the State Medical Society, and had held all of the offices in the Las Animas County Medical Society. Before coming to Colorado, he had been a member of the Arkansas legislature, and a surgeon in the Confederate service during the Civil war. Toward the close of the Civil war, as a paroled prisoner, he also practiced his profession with the federal forces. He was later a member of the state senate in Colorado, a county judge in Las Animas county, superintendent of public instruction, president of the city school board of Trinidad, mayor of Trinidad, and held numerous other civil positions of honor and trust. He was also a journalist of rare attainments, and founded and edited both the *Pueblo Chieftain* and *Trinidad Advertiser*. Notwithstanding his many attainments in his civil and journalistic career, he always maintained his position as one of the leading physicians of Colorado, and his work, both at the bedside and as a medical writer, was of very high order.

His death at an advanced age, surrounded by a loving family and grateful patients, is the fitting close of a long and brilliant career. His fame will long endure as a pioneer physician of Colorado.

On motion of Dr. Black, the report of the Committee was adopted.

Dr. Hubert Work then submitted the report of the committee appointed by the chairman to pass upon the report of the editor of COLORADO MEDICINE, as follows:

Your committee appointed to consider the report of the editor of COLORADO MEDICINE begs leave to submit the following:

That we unanimously concur in the recommendation that the annual publication of the society's transactions in book form be discontinued, for the reasons that the expenses of such publication this year have exceeded four hundred (\$400.00) dollars, in our opinion an unwarranted expense, in view of the fact that all papers of the society, with much additional matter, had already been published in COLORADO MEDICINE.

Your committee also recommends that the Colorado State Society acquire the *Colorado Medical Journal*, heretofore published in Denver; assume its contracts for unexpired ethical advertisements, and pay the heirs and assigns of said *Journal* \$101.25 as its purchase price.

We desire also to compliment the work of your Publication Committee on having been ethical, energetic and dignified, and request for it the continued cordial co-operation of the constituent societies of this association.

Respectfully submitted,

HUBERT WORK,

Chairman.

C. K. FLEMING.

A. S. TAUSSIG.

On motion of Dr. Black, the report was adopted.

The report of the Committee on Public Policy and Legislation, which had been referred back to the committee for their signatures, was then submitted by Dr. Epler, as follows:

#### REPORT OF THE COMMITTEE ON PUBLIC POLICY AND LEGISLATION.

*To the President and House of Delegates of the Colorado State Medical Society, in Session Assembled, Gentlemen:*

In lieu of the report submitted by the chairman of the Committee on Pub-



lic Policy and Legislation, the majority desires to submit the following report for the reason that the chairman's report covers things which do not properly belong to this committee's work, and for the further reason that the House of Delegates referred the chairman's report to the entire committee for verification and signature.

#### LEGISLATION.

It is useless to call your attention at length to the success and failure of your committee along legislative lines during the past year, as you are all well appraised of the results of our efforts.

During the past twelve months the committee has had to cope with a peculiar and obstinate legislature in session assembled.

The main accomplishments along legislative lines which pertain directly to the committee's work, and for which the chairman, Dr. Van Meter, is deserving of all the credit, are:

1st. The passage of the Pure Food and Drug Act.

2d. The enactment of the Anti-Advertising Law.

These two, fostered by the Medical Society and introduced by our friend, the Hon. H. E. Kelly, are now upon the statute books of the state, and should be appreciated by the profession as a right step in the right direction.

The Lunacy Law, which was outlined by prominent alienists of the state, and which was introduced by the State Board the Charities, failed.

The Hospital Bill, drawn to protect the legitimate hospitals, also failed.

The Medical Bill, which was really an amendment to the present Medical Law, also did not receive sufficient consideration to pass.

For brevity's sake, it is enough to say that the foregoing are the facts.

#### PUBLIC POLICY.

Your committee desires to call your attention to a rapidly growing impression throughout the state in the unfortunate fact that there is a rapidly growing feeling that the present Medical License Law is either insufficient, or that it is poorly administered.

Your committee does not wish to pass upon the question, and make recommendations, for the reason that it feels the best way to ascertain the truth and facts in the premises is to have the House of Delegates select a special committee, unbiased in opinion, no two being from the same councilor district, whose duty it shall be to call upon the State Board of Medical Examiners while in session, as often as necessary, ascertain the workings of that body in all matters relative to the points in question, and report in writing to the House of Delegates, with recommendations, at the annual meeting in 1908.

In conclusion, the committee would recommend that the by-laws be so amended as to give each member on the committee a longer term, say a three-year term, one member being appointed each year after the beginning year. The object is obvious, namely; to have old and experienced material on the committee all the time.

A further recommendation is that \$50 be appropriated for the expenses of the committee during the even numbered years, and that \$150 be appropriated for the odd numbered years; that said funds shall be used to the best advantage, as decided by a majority of the committee.

Any excess over and above actual incurred expense shall annually be returned to the treasury of the State Society.

Very respectfully submitted this 17th day of September, 1907.

GEORGE H. CATTERMOLLE,  
CRUM EPLER,

Majority Committee on Public Policy and Legislation.

On motion of Dr. Little, the report was adopted.

Dr. Kahn then read the report of the Committee on Appropriations, as follows:

APPROPRIATIONS FOR 1907-1908.

For COLORADO MEDICINE, \$2.00	
per capita on 693 members..	\$1,386.00
Official Stenographer.....	153.50
For expenses Dr. Mayo.....	100.00
Editor COLORADO MEDICINE.....	300.00
Secretary State Society.....	200.00
Stenographers for Sections...	60.00
Program .....	50.00
Incidentals .....	50.00

\$2,309.50

Purchase of <i>Colorado Medical Journal</i> .....	\$ 101.25
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\$2,410.75

SOL. G. KAHN,  
W. T. LITTLE.  
E. STUVER.

Dr. Chipman moved that the report be adopted.

Dr. Jackson moved to amend the report by including an appropriation of \$50.00 for the expense of the Committee on Public Policy and Legislation during the coming year. Carried.

The original motion of Dr. Chipman, as amended, was then seconded and carried.

On motion of Dr. Chipman, the amendments to by-laws, as read at the previous session, were adopted.

Dr. Chipman requested a new charter be given to the Northeastern Medical Society, on account of the inability of the

society to secure the return of their charter from the secretary, who had gone to California.

On motion of the secretary, the Northeastern Medical Society was granted a duplicate charter.

Dr. Stuver then submitted to the House the following resolution:

WHEREAS, The doing of contract practice for lodges, fraternal orders, societies and similar organizations, at entirely inadequate prices, is derogatory to the dignity and subversive of the welfare of the medical profession; and,

WHEREAS, Such practice tends to careless, slovenly and inefficient work on the part of the physician, thereby lowering his efficiency and scientific standing, and at the same time militating against the best interests of the patients; therefore, be it

*Resolved*, By the House of Delegates of the Colorado State Medical Society, in regular convention assembled, that such contract practice is hereby condemned, and that our constituent societies are instructed to use every possible legitimate means to suppress and stamp it out.

(Signed)

DR. E. STUVER,  
Ft. Collins, Colo.

RESOLUTIONS.

WHEREAS, There has recently appeared in the newspaper supplements, commonly called the patent insides, published by the Western Newspaper Union of Denver, and furnished to a large number of the rural newspapers of Colorado, as a portion of their regular weekly issues, certain articles reflecting on the honesty, public spirit, fairness and intelligence of the medical profession and containing wilful misrepresentations of the objects and purposes of our organization and of the American Medical Association, such articles being for the evident pur-

pose of discrediting our efforts and to create distrust and dissatisfaction among the people with the entire medical profession; such articles being apparently a part of a deliberate campaign against reputable medical men in behalf of the patent and proprietary medicine forces, in retaliation for the recent exposures of their humbugs and swindles upon the public; therefore, be it

*Resolved*, By the House of Delegates of the Colorado State Medical Society, that this society condemns this underhanded and insidious attack upon our profession and our organization, and requests all state newspaper publishers to protest against the use of such material and to refuse their patronage where it is used. Be it further

*Resolved*, That the secretary of this society be instructed to present these resolutions to the Western Newspaper Union with the request that this gratuitous and contemptible affront to our profession and its members shall cease.

J. C. CHIPMAN.

Adopted.

Dr. Williams moved the endorsement of the resolution, with the further statement that such practice is unethical and improper.

The motion was seconded and carried.

The secretary then presented the following names for honorary membership in the Colorado State Medical Society: Drs. Charles H. Mayo and L. B. Wilson, of Rochester, Minn.; Drs. H. D. Niles and William Tyndale, of Salt Lake City, Utah.

On motion the above names were added to the list of honorary members.

The secretary then stated that according to the by-laws the election of officers is the first order of business at the last meeting of the house, and moved that all the work of the morning be set aside.

The motion was seconded and carried.

Dr. Work, chairman of the Committee on Nominations, withdrew Dr. Corwin's name, because of his absence, and stated that he wished to nominate, without the authority of the committee, Dr. Epler.

Dr. Work also stated that he had been requested by Dr. Hopkins to withdraw his name for the office of president, and to move that the election of Dr. Whitney be made unanimous.

The motion was seconded and carried.

Dr. William P. Harlow, of Boulder, was nominated for the office of first vice president, and on motion the nominations were closed, and the secretary instructed to cast the ballot of the house for Dr. Harlow.

Dr. W. W. Swan, of Colorado Springs, was nominated for second vice president, and on motion of Dr. Chipman, the nominations were closed, and the secretary instructed to cast the ballot of the house for Dr. Swan.

Dr. W. W. Crook, of Glenwood Springs, was nominated for third vice president, and on motion of Dr. Stover, the nominations were declared closed, and the secretary instructed to cast the ballot of the house for Dr. Crook.

Dr. George W. Miel, of Denver, was nominated for the office of treasurer, and on motion of Dr. Finney, the nominations were closed, and the secretary instructed to cast the ballot of the house for Dr. Miel.

Dr. Robert Levy and Dr. J. J. Pattee were nominated for counsellors, and on motion of Dr. Blaine, the nominations were declared closed, and the secretary instructed to cast the ballot of the house for these gentlemen.

Dr. Jackson then nominated Dr. Hubert Work to serve as delegate to the meeting of the American Medical Association.



The motion was seconded by Dr. Little.

Dr. Work nominated Dr. Epler, and requested that his friends would vote for Dr. Epler.

After some discussion, on motion of Dr. Black, the nominations were closed.

Dr. Work then withdrew his name, and on motion of Dr. Chipman, the secretary was instructed to cast the ballot of the house for Dr. Epler.

Dr. John Espey was nominated for alternate delegate to the meeting of the American Medical Association, and on motion of the secretary, the nominations were closed.

Dr. Moleen moved to amend the motion to the effect that the secretary cast the ballot of the house for Dr. Espey.

The amendment was accepted by Dr. Black, and the motion, as amended, was carried.

Dr. J. M. Blaine was nominated as a member of the Publication Committee, and on motion of Dr. Finney, the nominations were closed, and the secretary instructed to cast the ballot of the house for Dr. Blaine.

Dr. Work moved that the next meeting of the society be held in Denver, at a time to be determined by the officers of the society.

The motion was seconded and carried.

Dr. Moleen stated that he understood Dr. McCormack intended coming west this year, and moved that the counsilors be instructed to enter into correspondence with Dr. McCormack with a view to getting him to come to Colorado at some future date convenient to all parties, and to make arrangements for a series of meetings.

The motion was seconded and carried.

On motion of the secretary, the work that had been set aside was readopted.

The secretary then moved that letters of thanks be sent to the Local Entertain-

ment Committee, Hotel Colorado, the Hot Springs Company and the Central Colorado Power Company for their courteous attentions.

The motion was seconded and carried.

The house then adjourned *sine die*.

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#### MINUTES OF THE GENERAL MEETING.

September 17, 1907.

The society was called to order at 10 a. m., by the president, Dr. H. R. Bull, of Grand Junction, who stated that he was gratified to find such a large representation present at such a great distance from the medical centers of the state.

The first paper upon the program was read by Dr. E. Stuver, of Fort Collins, and was entitled "Heredity."

This paper was discussed by Drs. Work and Fairfield.

Dr. O. P. Shippy, of Saguache, then read a paper entitled "The Effect of Altitude on Heart Lesions in Children."

The paper was discussed by Drs. Melvin, Cattermole, Driscoll and Giffin.

The paper of Dr. James F. Kerns, of La Junta, entitled "The Physician and Self Dispensing," was read by Dr. Frank Finney, and was discussed by Drs. Andrew, Stuver, Melvin, Lazell, Harmer, Monroe, Moleen and Fairfield.

Dr. Crum Epler, of Pueblo, then read a paper entitled "The Medical Society."

Dr. Epler's paper was discussed by Drs. Finney, Black, Wetherill, Jackson, Ruth and Graves, Dr. Epler closing the discussion.

Dr. A. C. McClanahan, of Victor, read a paper entitled "Aneurism of the Thoracic Aorta."

On account of the lateness of the hour, the discussion of this paper was postponed.

The society then adjourned until 10 a. m. Wednesday.

September 18, 1907.

The society was called to order at 10 a. m. by the president, Dr. Bull.

Dr. McClanahan's paper, of the previous day, was then discussed by Drs. Cattermole, Freeman, Swan and Levy.

Dr. Herbert B. Whitney, of Denver, then read a paper entitled "Indications for Venesection With a Few Illustrated Cases."

Dr. Whitney's paper was discussed by Drs. Arneill, Hill, Keeney, Niles and Mayo, the discussion being closed by Dr. Whitney.

Dr. J. G. Hughes, of Greeley, Colo., then read a paper entitled "Acute Broncho-Pneumonia."

This paper was discussed by Drs. Swan, Lindsay, Stuver, Espey, Arneill, Whitney and Garwood, Dr. Hughes closing the discussion.

Dr. Carl Johnson, of Montrose, next read a paper entitled "Treatment of Pneumonia."

The paper was discussed by Drs. Robinson, Gilbert, Wilkinson and Lazell.

Dr. F. R. Smith, of Grand Junction, then read a paper entitled "The Out of Door Life and Rest in the Treatment of Tubercular Disease."

Dr. Smith's paper was discussed by Drs. Holden, Simon, Taussig, Pattee and McConnell.

Dr. E. B. Queal, of Boulder, then read a paper entitled "Recent Advances in the Physiology of the Digestive Tract Bearing on Medicine and Surgery."

The paper was discussed by Dr. Hill.

The following papers were then read: "Infection of the Fallopian Tubes," by Dr. J. W. Rambo, of Portland.

"Sudden death During Pregnancy or Puerperium," by Dr. Z. H. McClannahan, of Colorado Springs.

"Report of a Case of Fracture at the Base of the Skull with Prolonged Un-

consciousness: Recovery," by Dr. W. J. LeRossignol, of Rifle.

These papers were discussed by Drs. Taylor, McHugh, Mayhew, Shippey and Wetherill.

The society then adjourned until 8 p. m.

The society convened at 8 p. m., Dr. Charles H. Mayhew, of Rochester, Minn., addressed the society on the subject of Exophthalmic Goitre.\*

Dr. L. B. Wilson followed with remarks on the pathology of the subject of Dr. Mayo's address.

#### MINUTES OF THE SECTION ON SURGERY, GYNECOLOGY AND ORTHOPEDICS.

This section was called to order by the chairman, Dr. Leonard Freeman, on Thursday morning, at 10 a. m.

Dr. George B. Packard, of Denver, read a paper entitled "Periarthritis of the Shoulder," which was discussed by Drs. Baldwin, Grant, Niles, Ruth and Wetherill.

Dr. H. D. Niles, of Salt Lake City, Utah, then read a paper entitled "The Frequency of Gall-Bladder Inflammations Associated with Gastric Ulcer and the Causative Relation Between These Two Morbid Conditions."

Dr. Niles' paper was discussed by Drs. Mayo, Grant and Powers.

Dr. J. N. Hall then read a paper entitled "Abdominal Diagnosis as Tested by Operation," which was discussed by Drs. Mayo and Powers.

Dr. J. F. Connell, of Colorado Springs, then read a paper entitled "Tubercular Seminal Vesiculitis," which was discussed by Drs. Mayhew, Niles and Freeman.

Dr. H. G. Wetherill, of Denver, then read a paper entitled "Bone Cavities and Interspaces and Their Treatment," which was discussed by Mr. Mayo.

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\*This paper is published in the October issue of the Illinois Medical Journal and Ohio State Medical Journal.

Dr. Charles A. Powers, of Denver, read a paper entitled "Results in Cases of Amputation at the Shoulder Joint," which paper was discussed by Drs. McNaught and Miel.

Dr. B. H. Matthews, of Denver, then read a paper entitled "Relation of Vaccine Therapy to Surgery," which paper was discussed by Drs. Webb, Wilson, Mayo and Arneill.

The paper of Dr. Walter A. Jayne, of Denver, entitled "Acute Pancreatitis, With Report of Two Cases," was read by title, the author not being present.

The section then adjourned *sine die*.

The general society was then called to order by President Bull, when the president-elect, Dr. H. B. Whitney, escorted by Dr. Frank Finney, was introduced by the chair. Dr. Whitney spoke as follows:

*Members of the Colorado State Medical Society:*

If I should say, "this is so sudden," it would hardly do justice to the kind and generous enthusiasm to which I know to have been shown by many of my Denver friends particularly, and I wish to express my appreciation of their efforts in my behalf. I am deeply sensible of the fact that there are many—very many—members of this society who deserve this high honor more than I. It has been conferred upon me, I am sure, not so much because of any special merit, as on account of my gray hairs, which represent long membership in the society, and because it was thought, perhaps, that after quite a line of surgical presidents, the more distinctly medical side of the Denver profession ought to be recognized. I thank you all, and you may be assured that the very best I have to give will be wholly devoted to the service of the Colorado State Medical Society during this coming year.

SECTION ON OPHTHALMOLOGY AND OTOLARYNGOLOGY.

The meeting was called to order by the chairman, Dr. Robert Levy, of Denver, who spoke in commendation of the large number present.

The first paper, "The Faucial Tonsil in the Tubercular Disease," by Dr. P. F. Gildea, of Colorado Springs, was read by title, Dr. Gildea not being present.

The second paper, "The Pernicious Influence of Diseased Tonsils and Adenoids on the General Health," by Dr. Wm. C. Bane, of Denver, was read, and the discussion opened by Dr. F. L. Dennis, of Colorado Springs. The discussion was continued by Dr. L. B. Wilson, of Rochester, Minn., Dr. F. R. Spencer, of Boulder, Dr. Melville Black, of Denver, Dr. J. J. Pattee, of Pueblo, Dr. T. E. Carmody, of Denver, Dr. C. A. Ringle, of Greeley, Dr. Will H. Swan, of Colorado Springs, Dr. Otis Orendorf, of Canon City, Dr. F. H. Wells, of Grand Junction, and was closed by Dr. Bane.

The third paper, "Interstitial Punctate Infiltration of the Cornea, With Report of a Case," by Dr. F. R. Spencer, of Boulder, was read, and the discussion opened by Dr. Edward Jackson, of Denver. The discussion was continued by Dr. E. W. Stevens, of Denver, and was closed by Dr. Spencer.

The fourth paper, "Indirect Injuries of the Optic Nerve," by Dr. E. W. Stevens, of Denver, was read, and the discussion opened by Dr. Melville Black, of Denver.

The fifth paper, "Ocular Tuberculosis," by Dr. Edward Jackson, of Denver, was read, and the discussion opened by Dr. E. W. Stevens, of Denver. The discussion was continued by Dr. C. A. Ringle, of Greeley, and was closed by Dr. Jackson.

The sixth paper, "Primary Mastoiditis, With Report of a Case," by Dr. C.



E. Cooper, of Denver, was read, and the discussion opened by Dr. E. F. Conant, of Denver. The discussion was continued by Dr. L. B. Lockhart, of Denver, Dr. Wm. C. Bane, of Denver, Dr. Robert Levy, of Denver, and was closed by Dr. Cooper.

The seventh paper, "Non-Specific Ulceration of the Bones of the Nose and Face, With the Bacteriological Findings and Pathologic Reports of Three Cases," by Dr. F. H. Wells, of Grand Junction, was read, and the discussion opened by Dr. E. T. Boyd, of Leadville. The discussion was continued by Dr. C. E. Ruth, of Denver, Dr. C. B. Lyman, of Denver, Dr. T. E. Carmody, of Denver, and was closed by Dr. Wells.

The eighth paper, "Cleft Palate," by Dr. T. E. Carmody, of Denver, was read, and the discussion opened by Dr. C. B. Lyman, of Denver. The discussion was continued by Dr. C. E. Ruth, of Denver, and closed by Dr. Carmody.

#### SECTION ON MEDICINE AND NEUROLOGY.

The meeting was called to order by the chairman, Dr. Hubert Work, of Pueblo.

The first paper was read by Dr. R. C. Robe, of Pueblo, on "Acute Pancreatitis." The discussion was opened by Dr. H. T. Pershing, of Denver, and was continued by Drs. Taussig and Arneill, and was closed by Dr. Robe.

The second paper was read by Dr. W. R. Tyndale, of Salt Lake, Utah, on "The Value from a Therapeutic Standpoint of Accurate Differential Diagnosis in Cardiac Lesions." The discussion was opened by Dr. Saling Simon, of Denver, and was continued by Drs. Gilbert, Skoog, Taussig, Arneill, Kleiner, McGugan, Moleen and Lazell, and was closed by Dr. Tyndale.

The third paper was read by Dr. Gerald B. Webb, of Colorado Springs, on "Some Opsonic and Bacterial Vaccine

Experiences." The discussion was opened by Dr. G. W. Holden, of Denver, and was continued by Drs. Cattermole, Arneill and Wilson, and closed by Dr. Webb.

The fourth paper was read by Dr. A. L. Skoog, of Pueblo, on "A Study of the Reflexes in the Insane." The discussion was opened by Dr. Arthur McGugan, of Denver, and was continued by Drs. Pershing, Oettinger, Lazell and Moleen, and was closed by Dr. Skoog.

The fifth paper was read by Dr. J. E. Courtney, of Denver, on "Acute Melancholia, With Report of a Case." The discussion was opened by Dr. H. T. Pershing, of Denver, was continued by Drs. McGugan and Lazell, and was closed by Dr. Courtney.

The sixth paper was read by Dr. Bernard Oettinger, of Denver, on "A Case of Hysterical Mutism, Recurrent Autohypnotic Sleep, Simulated Deafness; Symptomatic Recovery With Development of Hypomania." The discussion was opened by Dr. H. T. Pershing, and was continued by Drs. Moleen and Courtney, and was closed by Dr. Oettinger.

The seventh paper was read by Dr. Howell T. Pershing, of Denver, on "Diagnosis and Treatment of Migraine." The discussion was opened by Dr. George A. Moleen, of Denver, was continued by Dr. Courtney, and was closed by Dr. Pershing.

The eighth paper, by Dr. C. D. Spivak, of Denver, entitled "The Examination of Occult Blood," was read by title.

#### SECTION ON PEDIATRICS, CONTAGIOUS DISEASES AND SANITARY SCIENCE.

The section was called to order at 10 a. m., by Chairman Herbert Whitney, M. D., and from the number in attendance, appeared to have her full share of the visitors.

Dr. F. P. Gengenbach, of Denver, then read a paper entitled "Observations on Infant Feeding Methods."

Before taking up the matter of discussion on the paper of Dr. Gengenbach, upon motion, duly seconded and carried, it was decided to have the second paper, "Some Solutions of the Problem of Infant Feeding," by Elsie S. Pratt, M. D., of Denver, read, and the discussion be had on both papers at the same time.

The papers were discussed by Drs. Black, Melvin, Little, Stuver, Taylor, Kenney, Cattermole, Bull, Call, Lawney, Whitney, F. P. Gengenbach closing the discussion.

Dr. H. W. Rover, of Denver, then read a paper entitled "A Plea for Greater Preventative Care During Scarlet Fever." Dr. Taylor being absent, the discussion became general. Those taking part were Drs. Espey, Stuver, Kenney, Lawney, H. W. Rover closing the discussion.

Dr. F. W. Kenney, of Denver, then read a paper entitled "Congenital Syphilis, With Report of Case." Dr. Lyons being absent, the discussion became general, Drs. Simon and Davis taking part.

Dr. J. Tracy Melvin, of Saguache, then read a paper entitled "Medical Supervision of School Children," which was discussed by Drs. Bull, Stuver, Gill and Cattermole.

Dr. W. T. Little, of Canon City, then read a paper entitled "Pneumonia in Infants," which was discussed by Drs. Espey, Gill, Cattermole, Melvin, W. T. Little closing the discussion.

Dr. E. C. Hill, of Denver, then read a paper entitled "Food Adulterations in Relation to Health," which was discussed by Dr. Call.

The society then adjourned until 1:30 p. m.

## Progress of Medicine

### INTERNAL MEDICINE.

EDITED BY

O. M. Gilbert, M. D.,

Associate Professor of Medicine, University of Colorado.

William J. Baird, M. D.,

Boulder, Colorado.

### THE BEARING OF RECENT CLINICAL RESEARCHES ON DIET IN DISEASES OF THE STOMACH.

Gerhardt Jena (*Zeitschr. fur. arztliche Fortbildung*, No. 11, 1907,). Often the stomach, both healthy and diseased, is capricious, one cannot eat raw meat, another refuses milk, a third fats, some sweets. In formulating a diet for a stomach-sick patient, the possibility of an idiosyncrasy should be in mind and inquired about. The progress in the treatments of diseases of the stomach during the last decade has been chiefly in the acquisition of a better knowledge of the digestibility of different foods, particularly in disease.

Generally speaking, we consider a food digestible if it makes slight demands on the digestive organs, and does not cause discomfort. The digestibility of a given food is conveniently determined by the length of time it remains in the stomach. Fluids: water, tea, coffee, beer, light wines, milk and meat soup in quantities not above 200 CC. leave the stomach within two hours. Coffee with cream, cocoa with milk, strong alcoholic drinks, eggs (100 grams), chopped meats, boiled fish (200 grams), light vegetables or fruits (150 grams), white bread (70 grams), or zwieback, three hours; the lighter meats (20 grams), boiled chicken, pigeon, broiled quail, raw or cooked beef, beefsteak (100 grams), black bread (150 grams), potatoes, rice, carrots and spinach, four hours; goose, rabbit, broiled, fillet of beef (250 grams), smoked tongue, peas and beans (150-200 grams), five hours. That food is most

digestible which is most readily broken up into small bits, or reduced to a pap form.

Clinical study of digestion by means of test meals and gastric analyses has shown that under pathologic conditions the secretion of hydrochloric acid may vary within wide limits; from twice the normal to absolute suppression, but much more is to be hoped for from careful dieting in hyper- than in subacidity.

Excessive secretion of hydrochloric acid may cause acid eructations cardialgia and vomiting usually within one hour after taking food. Pain comes on when the percentage of hydrochloric acid has reached a certain degree and continues until the stomach is empty.

Occasionally hyperacidity in persons of a sedentary habit may be relieved by a vegetable diet with a liberal allowance of milk and cream. Time was when it was thought that pain and other subjective disturbances were always present when there was hyperacidity, but larger experience and clinical study have shown that hyperchlorhydria may exist without causing the slightest discomfort, and we now think that hyperacidity only causes discomfort when it is associated with hypersensitiveness of the stomach mucosa. The discomfort caused by hyperacidity may be most readily relieved by general treatment and von Noorden has advised forced feeding, hoping that with improvement in general nutrition the dyspepsia nervosa hyperacida would disappear.

In subacidity the conditions are simpler. In acute gastritis and chronic gastric catarrh with much discomfort, a liquid diet usually gives relief. In chronic gastritis Jürgesen gives three times daily 100 grams of raw scraped beef with considerable salt and pepper, rolls with 20-30 grams of fresh butter, and  $\frac{1}{4}$  litre of good light Bordeaux wine.

In the treatment of gastric ulcer, Lenhartz cautions against the starving regime and aims to give sufficient proteid food to combine the excess of acid present, restore the body to the normal, and by rest in bed and limitation of liquids, to keep the stomach outlines within the normal limits. He begins immediately after a hemorrhage, his proteid diet and orders for the first day two eggs and 200 cc. of milk well beaten together and given ice-cold in teaspoonful doses, and adds one egg and 100 cc. of milk each day until eight eggs and one litre of milk are taken; on the third day 20 grams of sugar gradually increased to 50 grams, by the ninth day; on the sixth day 100 grams of raw scraped beef gradually increased to 300 grams; the eighth day one zwieback gradually increased to four and from the tenth day 50 grams of raw ham and 20 grams of butter. He writes enthusiastically of his results; of 140 patients with recent hemorrhages he lost only three..

In the preparation of a diet list, three things should be kept in mind; the influence of certain foods on the secretion of gastric juice, the importance of an increase or diminution of the percentage of hydrochloric acid in reference to digestion and relation of increased gastric secretion, particularly hydrochloric acid, to pain or other discomfort. W. J. B.

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#### ANTISEPTIC ACTION OF TOBACCO SMOKE.

Arnold (*London Lancet*, May 4, 1907,) experimented on diphtheria bacilli, typhoid bacilli, colon bacilli, streptococcus and staphylococcus, pyogenes aureus, as to their resisting power to tobacco smoke as well as the smoke from hay or other vegetable matter. In all there was a decidedly inhibitory effect. Typhoid and colon were most effected by the hay smoke while streptococcus



from throat or scarlatinal patient, were rendered almost entirely inactive by five minutes' exposure to either tobacco or hay smoke. . . .

[I recall that, while on a hospital house staff several years ago there was a very severe epidemic of tonsillitis, and the two members who were non-smokers were attacked early in the epidemic, and the remainder of the staff attributed their immunity to tobacco smoke, but later they were all attacked and with greater severity.—DEPT. ED.]

O. M. G.

#### WIDAL REACTION IN CEREBRO-SPINAL MENINGITIS.

Symmers and Wilson (*Brit. Med. Journ.*, Sept. 21, 1907,) record a case of cerebro-spinal meningitis which was typical both clinically and pathologically—including the presence of the diplococcus intra-cellularis—in which a positive widal was found. A dilution of 1/200 agglutinated in 15 min. A faithful search, both before and after death, failed to reveal typhoid bacilli, and there was a well corroborated history that the patient had not been ill a day since her ninth year, when she had scarlet fever, so they think previous typhoid infection can be eliminated.

They mention that they have in preparation a paper dealing with anomalous agglutinative effects exerted by the serum of cerebro-spinal meningitis on bacteria other than the specific coccus. I think most of us will remain skeptical until more evidence is brought forward—especially as it seems possible for persons exposed to typhoid infection to develop an immunity without showing many, if any clinical symptoms.

O. M. G.

#### NERVOUS AND MENTAL DISEASES.

EDITED BY

Bernard Oettinger, M. D.,

Neurologist to the Hospital for the City and County of Denver, and St. Anthony's Hospital, Denver, Colorado.

#### ALCOHOL INJECTIONS IN NEURITIS AND NEURALGIA.

Fischer (*Munch. Med. Wochenschr.*, Aug. 6, 1907,) treated fifteen cases of neuritis and neuralgia by alcohol injection which is made directly in the nerve, usually at the point of greatest tenderness. Seventy per cent alcohol was used. Out of twelve cases of sciatica thus treated, four were completely cured, four much relieved, in three no relief was obtained, and in one case, although pain was relieved, complete paralysis of the deep peroneal nerve followed. Three cases of trigeminal neuralgia were cured. In three cases treated by Erb, although pain was relieved, more or less complete paralysis followed the injection. The procedure, therefore, may be of great value, but is at the same time dangerous.

#### SIMILARITY OF CLINICAL PICTURE FROM CEREBELLAR TUMOR AND HYDRO-CEPHALUS.

Finkelnburg (*Periscope Jl. Nerv. and Ment. Dis.*, October, 1907,) reports three exemplifying cases. I. Child of 14 years, in whom symptoms had continued for over two years. Commenced with headache, then followed vertigo, staggering gait, diplopia, difficulty of urination, paresthesia of the back and extremities, finally impairment of memory, excited state, pain in back of head and neck, choked disk, left sided paralysis of the abducens. Reflexes were normal. At autopsy there was found a moderate hydrocephalus forcing the infundibulum forward, which then pressed upon the trigeminal and abducens nerves. The fourth ventricle was not distended, but in the floor was found a cavernous

angioma. Chronic inflammation of the choroid plexus was present. 2. A child of 7 years, presented for seven months, symptoms which included vomiting, frontal headache, staggering gait and loss of vision, choked disc, tenderness over the left posterior portion of the head, ataxia of the right arm and leg, incontinence of urine and feces. The reflexes were normal. The patient became blind; was unable to walk or stand; patellar response diminished with slight indication of a Babinski. Trephining was done without avail. At autopsy there was found a moderate hydrocephalus thrusting forward the infundibulum. Meninges and choroid plexus were normal to the eye and microscopically. 3. Symptoms in a woman of 36 years, began with headache in the parietal region, vomiting, staggering gait, attacks of vertigo and diminution of vision. Double choked disc presented, more marked on the left side; also tenderness to percussion over the parietal region. Tendon reflexes were active and Schmidt's symptom (i. e., evidence of increase in intracranial pressure with change of position), was positive. The patient died suddenly, after discharge of considerable fluid from the nose. Diagnosis of cerebellar tumor was made, but at autopsy a small circumscribed tumor was found in the right corpus striatum, the same projecting into the third ventricle, where it had produced a moderate degree of hydrocephalus. The essential features of these cases are: 1. That cerebellar gait may be present in chronic hydrocephalus and in tumors of the central ganglia even in their early stages. 2. That a normal reflex activity or a diminished reflex activity may exist with chronic hydrocephalus. 3. That Schmidt's symptom is not characteristic for tumor of the cerebellum, but may also occur in tumors of the cerebrum. 4. Circumscribed pres-

sure and percussion tenderness of the skull may occur in chronic hydrocephalus, and, therefore, have only slight value as a localizing sign. 5. Predominant development of the choked disc upon one side is not a certain indication for the homolateral position of the tumor.

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#### OPHTHALMOLOGY.

EDITED BY

E. W. Stevens, M. D.,  
Denver, Colorado.

#### SERUMS AND METALLIC FERMENTS IN OCULAR THERAPEUTICS.

A. Darier (*Ophthalmoscope*, October, 1907,) advocates the injection of anti-diphtheritic serum in doses of 10 cc. for a number of diseases of the eye, including membranous conjunctivitis, pneumo-coccal ulcers of the cornea, and post operative infections. He usually gives three or four injections of the serum and does not neglect local treatment. He uses anti-diphtheritic serum irrespective of the nature of the infection, and thinks the results are as good as with specific sera. He believes the serum treatment should be followed up with a series of intravenous injections of collargol.

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#### PNEUMOCOCCUS KERATITIS CURED BY ANTI-DIPHTHERITIC SERUM.

Fronmager (*Ann. d'Oculist*, January, 1907,) reports two cases of corneal ulcer due to pneumococcic infection treated by subcutaneous injection of 10 cc. of anti-diphtheritic serum. The injections were followed by rapid cure of the ulcers, which had previously been spreading in spite of their treatment with antiseptics, subconjunctival injections, cauterization and paracentesis of the cornea.

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#### THE TREATMENT OF CORNEAL ULCERS.

Desbriers and Grenier (Abstract in *Ophthalmoscope*, October, 1907,) recom-

mend the following treatment for corneal ulcers. (1) The lacrymal sac is syringed, and if there is dacryocystitis the lacrymal passage are curetted. (2) The eye is thoroughly irrigated with a 1 to 1000 solution of potassium permanganate. (3) The surface of the ulcer is lightly cauterized. (4) A solution of potassium permanganate (1 to 30) is dropped on the ulcer and kept in contact with it for half a minute. (5) The eye is again irrigated and an iodoform dressing applied. If there is a hypopyon, the center of the floor of the ulcer is perforated with the cautery. The solution of permanganate should be repeated daily or every second day, according to the progress of the case. Desbrieres claims to have treated 284 cases by this method without a single bad result.

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#### AN EFFICACIOUS TREATMENT OF INFECTIVE ULCERS OF THE CORNEA.

Eperon (*Arch. d' Oph.*, July, 1907,), after twenty years' experience with other measures, as the cautery, and Saemisch section, now treats infective ulcers of the cornea by means of zinc sulphate in a 20 per cent solution. The diseased surface is first cleansed, and then painted with the zinc. The immediate result of the application is to turn the parts white. Pain is not severe. Pus in the anterior chamber, if not too abundant, is quickly resorbed. Failing to do this, the pus is evacuated by a large incision in the lower part of the cornea. One application of the zinc, in Eperon's hands, has usually sufficed to arrest the infective process, but he always carries out accessory measures, such as hot compresses, disinfection of the crymal passage and the treatment of co-existing conjunctivitis.

#### THE TREATMENT OF SERPENT ULCER OF THE CORNEA. (PNEUMONOCOCCAL ULCER.)

H. W. Woodruff (*Journ. of Oph. and Oto-Laryngology*, April, 1907,) advises the following treatment: Rest in bed, dilatation of the pupil with atropine, the application of moist heat by cloths wrung out of hot boric solution and covered with oiled silk or rubber cloth. These applications must be used for one hour at least three times a day. The eye is irrigated with warm boric acid solution hourly or half hourly. The galvanocautery is more effective in the destruction of local infection than carbolic acid, alcohol, tincture of iodine, glacial acetic acid, nitric acid, or any chemical agent, but it should be used early before the infection is deep seated.

If, after twenty-four or forty-eight hours of the above outlined treatment, an increase of the hypopyon is noted an injection of the cyanide of mercury is given.

The conjunctiva is anesthetized by three or four instillations of a 4 per cent cocaine solution. Then eight minims of a solution of cyanide of mercury, 1 to 1000, with four minims of 4 per cent cocaine solution added are injected beneath the external conjunctival cul-de-sac with the hypodermic syringe. The needle should be plunged deeply into the tissues so that the injection is more than sub-conjunctival, and the tissues of the orbit surrounding the eye ball are bathed with this solution. The swelling and oedema which follows are quite severe. The injections of cyanide of mercury may be safely made in any stage except when perforation is about to occur. They may be made as often as twice in twenty-four hours.

Woodruff thinks paracentesis of the cornea should be used only when perforation is imminent.



**EAR, NOSE AND THROAT.**

EDITED BY

**Wm. C. Bane, M. D.,**

Professor of Otology, Denver and Gross College of Medicine.

**C. E. Cooper, M. D.,**

Denver, Colorado.

**PHYSIOGNOMY AND ITS RELATION TO THE  
SIZE AND EXTENT OF THE SINUS  
FRONTALIS.**

H. J. H. Hoeve (*Laryngoscope*, Sept., 1907), calls attention to the relation of the physiognomy and the size of the frontal sinus. At about the twentieth year, the sinuses increase in size, due in part to the internal extremities of the superciliary ridges becoming prominent. It is at this time the individual temperament is maturing, and for the purposes of his article, he accepts the classification of temperaments of Dr. Jacques, namely, motor, vital and mental.

The motor is most easily recognized by the great development of bone and musculature at the expense of the other portions of the organism. Seen principally in men. Such persons are heavy, have good muscular development, lack of adipose tissue, large teeth and joints, square jaw, powerful hands, etc. There is a retreating forehead, never high, due to a bulging out of the parietal bones indicating a well developed motor area, prominence of the internal portion of the superciliary ridges; coarse, heavy bone and a large amount of diploe between the frontal sinus and the external plate. In such an individual the frontal sinuses are small, and frequently absent. Operations require careful technique.

The vital temperament is characterized by a tall trunk, short limbs, round face and head, wide nostrils, thick and short neck and a well developed chest and abdomen. Most frequent among women.

The forehead bulges forward, especially in the superciliary region, and there is a convexity of lower frontal region. The whole forehead is gracefully round-

ed and the head slants upward and backward from a point half an inch below the hair line. Associated with such a physiognomy are thin bones; frequently the anterior wall of the sinus is in contact with the external plate of the os frontalis i. e., no diploe, as in the motor type—and large sinuses extending well outward, especially if the superciliary ridges are at all prominent.

The mental type is most frequently associated with a frail body, in comparison with a large head, oval face, sharply outlined features, well developed but not large muscles, slender hands and a general appearance of a well formed body. High, pale forehead, coronal region better developed than in either motor or vital types, even contour of the superciliary ridges, and anatomically we find strong, dense bone, with diploe between the sinus and external plate. Usually normal sized sinuses, which measure, according to Sir Logan Turner, 31 mm. from the upper opening of the infundibulum upward, 30 mm. from the median septum horizontally outward and 17 mm. from the anterior wall at a level of the fronto-nasal suture backward along the orbital roof.

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**THE RELATION OF TONSILLITIS TO RHEUMATISM.**

E. Fletcher Ingals (*Illinois Med. Journ.*, June, 1907), after reviewing the important literature on the subject, presents the results of a careful analysis from his case records. Out of 1,393 cases suffering from acute and chronic tonsillitis, 100 have been selected indiscriminately. In addition 100 control records of patients suffering from other conditions were chosen with the idea of ascertaining the prevalence of rheumatism not associated with tonsillitis.

Indoor occupations predominated, and 70 per cent were males. One under ten

years, and one over fifty years; 7 per cent between 40 and 50, 11 per cent between 10 and 20, 26 per cent between 30 and 40, and 54 per cent between 20 and 30 years.

Of the type of inflammation, 48 per cent were follicular, 35 per cent parenchymatous, 11 per cent suppurative and 3 per cent ulcerative. In 35 per cent the attacks were initial; 11 per cent were chronically affected, 9 per cent had one or two former attacks and 45 per cent had suffered from several previous attacks.

Thirty per cent were attributed to colds.

His analysis shows an identical cause in tonsillitis and rheumatism for at least 13 per cent of the cases, and possibly 29 per cent.

In 18 per cent there was a history of muscular pains which were ascribed to rheumatism.

In 8 per cent of acute cases articular rheumatism either accompanied or followed the tonsillitis; the same number had muscular rheumatism and in 5 per cent the rheumatic attack preceded the angina.

There is no adequate proof that the tonsil is the only or chief portal of infection but it is easily infected with pyogenic germs which may progress to systemic involvement and rheumatism is perhaps one of the phenomena.

Proof does not exist showing that tonsillitis prevents nor exists in lieu of an attack of rheumatism.

The statement that acute muscular rheumatism is nearly always preceded by tonsillitis is not upheld; for in only 2 per cent of the cases did muscular rheumatism follow tonsillitis. In 6 per cent, however, muscular pain, probably due to fever and inflammation, and attributed to rheumatism, accompanied the tonsillitis.

## Constituent Societies

A regular meeting of the Mesa County Medical Society was held at the office of Dr. F. R. Smith, Grand Junction, on Tuesday evening, October 1, 1907. The meeting was called to order at 8:20 by the president, Dr. G. R. Warner. Ten members were present. Minutes of the previous meeting were read and approved.

Dr. Hanson reported a case of considerable interest. The patient, a boy, aged eleven years, who, one week previous had wrenched the left hip. No discomfort was experienced until three days had elapsed from the time the injury was sustained. Boy had previously enjoyed good health. At this time the left hip was giving him more or less trouble and of a somewhat obscure nature, on account of which, a diagnosis was withheld. Twenty-four hours later the patient was quite nervous and complained of pain in all of the joints. Left thigh was swollen, measuring two inches larger in circumference than its fellow. Upon consultation, it was decided to give the patient the benefit of surgery. Under anesthesia an incision was made between the rectus and vastus externus muscle, the inter-muscular septum was followed down to the periosteum, which was found bulging. An incision was made and three or four ounces of pus was evacuated. On account of untoward symptoms, further procedure was not deemed advisable. Patient was resuscitated and wound dressed. Twelve hours later the wound had drained very slightly and the patient's condition was perceptibly worse. No improvement was noted within the next four hours; the patient succumbed sixty hours after operation. Post mortem examination revealed pus in the capsule of the joint extending into the medullary canal. Diagnosis: **Acute suppurative arthritis with an attending osteo-myelitis.**

The case was discussed in an informal manner.

Dr. Warner read an interesting and instructive paper, subject: **The First Dentition.** Among other things the writer told us that possibly teething was not responsible for all of the troubles attributed to it. The anatomical structure of the teeth was taken up and discussed at length. It was pointed out that the tissue overlying a tooth prior to its appearance and known as the gum, is simply mucus membrane of the same character as that of the rest of the mouth. It is bound

down to the alveolus by a few fibrous bands and has few, if any, nerves. Such being the case, how can the pressure of the enamel point against the nerveless mucus membrane with as yet, poor nerve connection through the pulp, cause all the reflex nervous symptoms it is said to cause. The disturbances thought to be caused by teething are, in the doctor's opinion, due to faulty diagnoses, coincident ills and ancient history. One author was quoted as saying that 95 per cent of the cases in which the symptoms are present during dentition, the trouble is due to some other cause.

Formal discussion of this subject was opened by Dr. Day, and continued by a majority of those present.

Dr. Bull, chairman of the Board of Censors, made favorable report upon the applications of Drs. C. W. Plumb and J. W. Halstead to become members of this society, and upon formal ballot these gentlemen were declared duly elected.

A motion was made and unanimously adopted that the secretary make a written request in the name of this society to the several druggists of the city asking them that their places of business be kept open each evening until 9 o'clock.

It was regularly moved, seconded and carried that the president appoint a committee of three members to select a place suitable for holding the meetings of the society. Drs. Welles, Abbott and Taylor were selected.

Dr. F. H. Welles made a complete and satisfactory report of the late meeting of the Colorado State Medical Society; for which, a vote of thanks was tendered him.

Dr. N. D. Wells' name was presented for membership. Referred to the Board of Censors.

Meeting adjourned.

A. G. TAYLOR, Secretary.

The Eastern Colorado Medical Association held its regular quarterly meeting in the Curry hotel parlors, at Fort Morgan, Colo., on the evening of October 9, 1907. Seven members were present, besides Dr. C. K. Fleming, of Denver, and one visitor. The meeting was called to order by President Dr. E. E. Evans, of Fort Morgan, with the regular order of business.

The following physicians were elected to membership in this society: Dr. W. W. Claybaugh, of Fort Morgan; Dr. A. F. Williams, of Fort Morgan; Dr. C. J. Madera, of Brush,

and Dr. C. T. Parkhurst, of Brush. Dr. C. K. Fleming of Denver, was elected to honorary membership.

Several important questions were discussed by the members.

The evening was concluded with a very interesting lecture delivered by Dr. C. K. Fleming, of Denver, for which the Eastern Colorado Medical Association extends its thanks to Dr. Fleming for his kindness.

The next meeting will be held at Wray, Colo., on the evening of January 7, 1908.

R. L. O'BRIEN, Secretary.

The Boulder County Medical Society met Thursday, October 3, at 8 p. m. Dr. Spencer, vice president, presided.

Members and visitors present: Drs. Garwood, Shiveley, Eva Shiveley, Gilbert, Phillips, Herr, Spencer, Queal, Clark, Trovillion, Johnstone, Wood.

Dr. Queal presented an interesting paper on "Recent Research in Digestion," which will appear in full in a later issue of *Colorado Medicine*.

Dr. Ida S. Herr presented a paper on *Antiseptic Dietary*. Dr. Herr states that each food generates or stimulates the production of the gastric juice best adapted for its digestion. This action is due to flavoring substances and peptogens. For example, milk produces the least active digestive fluid, meat produces a strongly acid digestive fluid, while bread produces a moderately acid but powerfully active digestive fluid. Since the gastric juice cannot at one time, be in the highest degree adapted to the digestion of several different foods, it follows that the bill of fare must be simplified for those with impaired digestive powers. One kind of food alone at a meal may be necessary, or a combination of foods allied in character.

The foods that encourage the formation of gastric acids are antiseptic in their action. Acid fruits and other juices are antiseptic because of the germicidal action of the organic acids they contain. Dr. Herr recommends a fruit diet for a few days in many cases of chronic disease in order to destroy many of the germs flourishing in the digestive tract. In many other cases a single meal of fruit during the day seems to have sufficient antiseptic action. It is certain that by careful study, a patient's dietetic needs may be ascertained.



The two papers were freely discussed by those present, and many interesting points were brought out.

Dr. Gilbert reported a case of typhoid in a child of sixteen months.

The Board of Censors reported favorably on the names of Drs. Nat G. Clark and Robert Henderson, Sr., for membership, and both were duly elected members of the society.

It was voted to meet once each week for six months, and take up post graduate work, the regular program committee to arrange programs.

Drs. Gilbert and Queal were appointed a committee to prepare resolutions on the death of Dr. King.

The society adjourned to meet October 17, 1907.

LUCY M. WOOD,  
Secretary.

The regular meeting of the **Weld County Medical Society** was held in Dr. Hughes' office, Greeley, Monday, October 7, at 8:30 p. m.

The meeting was called to order by President Ringle in the presence of a large number of members and many guests.

Minutes of previous meetings and routine business having been disposed of, the special program was taken up.

Dr. G. Law read the first paper, entitled **Personal Experience With Mineral Springs**, embodying his experiences in Routt county during the past summer.

The discussion was opened by Dr. Queal, of Boulder, who thought that water was the essential element of the springs.

A Symposium on **Gastric Ulcer** was opened by Dr. Spaulding, of Kersey, who took up the various views and theories of **Etiology and Pathology**.

Dr. Taussig, of Denver, ably presented its diagnosis, and Dr. Freeman, of Denver, closed with the **surgical treatment**.

The discussion of these papers was opened by Dr. Arneill, of Denver, and participated in by many members and guests.

Dr. Church closed the afternoon program with a paper on **Tuberculosis of Kidney and Bladder**, the discussion of which was opened by Dr. C. B. Lyman, of Denver, and continued by Dr. Freeman.

The evening session was held at the Camfield hotel, where sixty-five physicians and friends had assembled.

After the viands had been disposed of, President Ringle gave an address of welcome

and called upon Dr. Cattermole, of Boulder, to give the address of the evening, entitled **Social Standing of the Physician, Past and Present**.

The toasts were now in order, under the direction of Hon. Harry N. Haynes:

"Medical Profession," J. K. Miller, M. D.

"Other Professions," Chas. F. Tew.

"Our Guests," L. Freeman, M. D.

"Colorado State Medical Society," President Whitney.

"Wily Politician," Senator Clayton.

"Higher Medical Requirements," J. R. Arneill, M. D.

"Sweethearts and Wives," M. Black, M. D.

"Country Doctor," T. C. Taylor, M. D.

"The Pedagogue," Prof. C. E. Carter.

"Pharmacy," A. B. Craig.

"Alma Mater," A. S. Taussig, M. D.

The meeting adjourned at 2 a. m. with the singing of "Auld Lang Syne."

CHARLES B. DYDE, Secretary.

The regular monthly meeting of the **El Paso County Medical Society** was held at the Antlers Hotel on Wednesday, October 16, at 8:30 p. m.

Dr. G. H. Grimmell and Dr. A. H. Peters were elected to membership.

Dr. D. P. Mayhew gave the report of the delegates to the state convention, and closed his remarks with a motion as follows: "In view of the Recommendations of the House of Delegates concerning the question of insurance fees, and without knowing if errors of conduct have occurred, I would move you that a committee of three be appointed to ascertain whether or not there have been violations within our own society, and if such be found, to prefer charges against the violators with a view to their expulsion." The motion was seconded by Dr. Smith, and carried by a vote of the society.

Dr. Igo showed two cases of **cretinism**. Dr. Patterson showed a case of **tumor of the antrum**, probably malignant. Both cases were thoroughly discussed.

Mr. Mowry, the Market Master of Colorado Springs, then gave a report of the work that is being done in his department. Aside from the demanding of the cleaning up of drains, kitchens, etc., and all places liable to contaminate food by their filth, he told of the work he had been doing in finding and putting out of the way, tuberculous cattle. The paper was greatly enjoyed by those present, and was

thoroughly discussed by the members. All were agreed that the work was very essential to the public health, and offered Mr. Mowry their support in his good work.

The president then presented Dr. Schneider, of Colorado College, who told of his efforts to discover the cause of the typhoid epidemic which recently broke out in the college. In the course of two weeks between twenty-five and thirty cases developed in the two halls occupied by the young ladies of Colorado College. There have been no cases outside the college except a few scattered cases, and there has been no epidemic in the boys' halls, so the cause is not general. The water cannot be to blame, their vegetables come from different sources to the two halls, but they take milk from the same dairy. There are, however, no cases elsewhere on the milk route of that dairy. Therefore the matter cannot be satisfactorily settled. Prof. Strieby and Mr. P. B. Stewart spoke on the subject in the interests of the college. Upon motion of Dr. Swan, the chair appointed a committee of three to investigate the epidemic and report what action it would be best to take. He appointed Drs. Gardner, Swan and McKinnie. The meeting adjourned.

OMER R. GILLET, Secretary.

Trinidad, Colo., Oct. 12, 1907.

A regular meeting of the Las Animas County Medical Society was held at the office of Dr. Perry Jaffa, with President James G. Espey in the chair. The following members were present: Drs. Thompson, Forhan, James G. Espey, Robinson, Lee, Jaffa, Hinman and Freudenthal. Dr. Thompson reported an interesting case of Hodgkin's Disease, also a case of housemaid's knee; Dr. Forhan reported some interesting experiences he had had among his foreign clientele with typhoid fever. Drs. James Espey and Hinman reported several cases. Dr. Jaffa then presented the paper of the evening, entitled "My Visit to Rochester," in which he paid a glowing tribute to the Mayos and their work. The chair appointed Drs. Forhan and Thompson as a committee to draft suitable resolutions on the death of Dr. M. Beshoar. Dr. Thompson was chosen to present the next paper, the society to meet at his office. ALFRED FREUDENTHAL, Secretary.

## Other Societies

### Colorado Ophthalmological Society.

The first meeting of the season occurred on October 19, 1907, at the office of Dr. D. H. Coover, who presided. Attendance, 21.

Dr. G. F. Libby presented a child of three and one-half years showing complete albinism with nystagmus, photophobia, high astigmatism, much depreciated vision, and low alternating convergent squint. The iris and choroid were so devoid of pigment as to admit light freely, and the hair was pure white. The skin was pinkish, the eyes light blue. The child was well developed, sturdy and bright mentally; and presented the only case of albinism in four generations, at least.

Dr. Melville Black showed two cases: (1) phthisis bulbi in a child whose nose was broken and eye destroyed by an explosion last fourth of July; (2) epicanthus and absence of cilia and eye brows in a child.

Drs. Stevens and Coover exhibited a case of posterior scleritis, with bulging of the sclera near the equator of the eye, above and below, in an adult who had suffered from gummatous iritis in the preceding weeks. In the height of this severe attack glaucoma developed; for which Dr. Stevens did iridectomy and curetted out the lens substance, with relief of pain and benefit to the iritis.

Dr. Coover presented a man whom he had brought before the April meeting of the society on account of traumatic cataract and dislocated lens, in which dionin had been used almost every day since. The lens was mostly absorbed and V. with + 10.D. = 20/200.

Dr. G. H. Strader reported three cases of extensive ocular damage from foreign bodies in the cornea; in one case the cornea being badly stained, and in another severe keratitis resulted, while cataract, increased tension and severe pain occurred in the third case.

Dr. Coover reported two cases of congenital ptosis; one with epicanthus and congenital contraction of the commissure, the second showing ophthalmoplegia, as well as complete ptosis.

The following cases of foreign bodies in the eye-ball were reported: Dr. A. C. Magruder, penetrating wound caused by butt of corn stalk, followed by suppuration necessitating enucleation of eye; Drs. Jackson and Libby, each a case of suppurative hyalitis, followed by enucleation; Black, small piece of movable

copper in the vitreous; Coover, three pieces of copper revealed by the X-ray; Stevens, three cases of steel in the vitreous, with supuration and loss of two eyes, and saving of the third. Dr. Jackson also reported a successful removal of steel from the vitreous by aid of a magnet.

Dr. Libby repoted a very painful but quickly healing abrasion of the cornea caused by the bristles of a tooth-brush; and Dr. Neeper a similar but more troublesome injury from the straws of a whisk broom.

Dr. W. C. Bane presented a case of **double optic atrophy** following specific infection 18 years before. Vision was normal two years ago, but now R. V. = hand movements, L. V. = 5/30. Dr. G. A. Moleen could find no other evidence of involvement of the nervous system.

GEORGE F. LIBBY,  
Secretary.

## Correspondence

Holyoke, Colo., October 31, 1907.

Geo. A. Moleen, M. D., Editor, Colorado Medicine:

Dear Doctor—In your October number of Colorado Medicine, in an article under the title of "High Potency Gall," I find my name connected with "Dr. Dunn's Uterine Evacuant." I wish to say this: Something like a year and a half or two years ago, as I remember it, I received a letter from Dr. Dunn, setting forth the merits of his "Uterine Evacuant," giving it very high praise. The method looked bad to me, but I had several times had trouble with particles of retained placenta after child birth, and Dr. Dunn's circular letter covered this so nicely I was tempted to send for a bottle, and did so. Several months after, I had a case in point, as I have mentioned, and used it, but so far as I could see, got no results. I have never used it since, and have thrown away the balance of the bottle as no good, nor have I bought any more, nor will I. The description of the evacuant given in the circular describing its use in hospitals in Kansas City, I think, looked good. The advertising method looked bad. I took my chances, and got beat. I have never given permission for my name to be used in connection with any medicine, nor have I ever given a testimonial, nor do I ever expect to. Now, doctor, you can publish this letter, or otherwise set

me right in your journal. My method of practice is ethical. I try and have no hobbies, nor do I make a practice of using secret nostrums of any kind. I am yours very truly,

F. M. SMITH.

La Junta, Colo., October 29, 1907.

Dr. George A. Moleen, Editor, Colorado Medicine, Denver, Colo.:—

Dear Doctor—My attention was called yesterday to an article in the October number of your publication which surprised and pained me greatly. The facts in the case, so far as they relate to me, are these:

About three years ago I purchased two bottles of what was called "Dunn's Uterine Evacuant." As it was to be used for legitimate purposes, I believed I had a perfect right to do so. After a brief trial, it was discarded, since which time Dr. Dunn and his preparation have not entered my mind.

He had no right to use my name in advertising his Uterine Evacuant. It has been done without my knowledge or consent. How long this has been going on I do not know. Yours very truly,

B. F. HASKINS.

Del Norte, Colo., Oct. 28, 1907.

Dr. George A. Moleen:—

In your editorial comment of Oct. number of your journal, I find my name mentioned under the heading of High Potency Gall.

Which I presume in your mind (which I care but little) would stand branded as an abortionist. Eluding to Dr. Dunn's Uterine Evacuant, I bought one bottle about one year ago, and will give any man \$5.00 that will come to my office and find the bottle untouched, and the only bottle that has been purchased by me. I have never tried the medicine, nor have I ever had any intention of using it since the purchasing of the **one bottle only**.

I was not aware that my name has been used by Dr. Dunn in any manner, nor did I give him authority to use it. Feeling that you have done me a wrong, I will expect you to right that wrong, and place me in a correct light before your readers. Resp.,

D. W. CLARK, M. D.

Lake City, Colo., October 28, 1907.

Publishers Colorado Medicine, Denver, Colo.:

Gentlemen—My attention has been called to an article appearing in your October issue in



which my name is mentioned in connection with a special preparation marketed by a Dr. Dunn, of Denver.

I write to state that I have never used the preparation in question, and knowing absolutely nothing about it, have of course never furnished testimony concerning it.

I can recall that several years ago some preparation of Dr. Dunn's was ordered for the use of another physician who was engaged in practice here at that time, and who secured the greater portion of his supplies through my drug store. The books of the store do not show just what the preparation was. Yours truly,

D. S. HOFFMAN, M. D.

Baltimore, October, 1907.

Colorado Medicine:

Dear Sir—At the recent annual meeting of the American Pharmaceutical Association the undersigned was directed to send you a copy of the following resolutions:

Whereas, The American Medical Association, the American Pharmaceutical Association and the National Association of Retail Druggists, together with many state and local organizations and journals in both professions, have been for some years endeavoring to bring about a return to the practice of medicine based on the Pharmacopoeia, and,

Whereas, The medical colleges are represented on the Committee of Revision of the U. S. Pharmacopoeia, and,

Whereas, It is manifest to the thoughtful men in both medicine and pharmacy that a very large number of medical men might be better informed regarding the Pharmacopoeia as a book of reference and standards. Be it, therefore,

Resolved, That it is the sense of the American Pharmaceutical Association in convention assembled, that a great advance in the ethical practice of medicine and pharmacy will be made when the medical colleges make the Pharmacopoeia a prescribed text-book or book of reference and require a familiarity with it in their examinations.

Resolved, That we request the governing authorities of all medical colleges in the United States to put in force such a ruling in their respective institutions as will insure in future classes a well grounded knowledge of materia

medica and pharmacognosy, as set forth in the Pharmacopoeia.

Resolved, That the general secretary be directed to transmit a copy of these resolutions to each medical college in the United States and to the medical and pharmaceutical press.

Very Truly Yours,

CHAS. CASPARI, JR.,  
General Secretary American Pharmaceutical Association.

## Items

At the meeting of the State Board of Medical Examiners, on October 1, 1907, there were 73 applicants for license, and of these

- 41 were granted credentials;
- 8 were granted on examination;
- 5 were refused;
- 2 were deferred for completion of their application;
- 7 were deferred for future investigation;
- 10 were deferred for examination.

License No. 4264, E. H. Dunn, was revoked for aiding and abetting in attempting an abortion.

A petition and argument from E. H. C. Graeb to reopen case and rescind action in revoking his license, No. 4854, was heard and petition denied.

S. D. VAN METER,  
Secretary.

## New Members

Farrington, F. H., Boulder; Peters, A. H., Grimmel, G. H., Colorado Springs; Morrison, C. S., Colorado City; Williams, A. T., Claybough, W. W., Fort Morgan; Parkhurst, C. T., Brush; Nossaman, A. J., Pagosa Springs; Raymond, I. E., Windsor.

## Deaths

Dr. George W. McClanahan, of Idaho Springs, a member of the Clear Creek Medical Association, died in Denver, October 10, 1907, as a result of cerebral thrombosis. The doctor was 47 years of age, and graduated from the American Medical College (Eclectic) of St. Louis, Mo., in 1881. He was licensed to practice in Colorado in 1905.

## Books Received

[All books received will be acknowledged in this column to be recognized by the contributor as the equivalent. Reviews will be made of these volumes according to merit and the interests of our readers.]

**A Manual of Clinical Diagnosis by Means of Macroscopic and Chemical Methods, for Students, Hospital Physicians and Practitioners.** By Charles E. Simon, B. A. M. D., formerly of the Resident Staff of the Johns Hopkins Hospital; Professor of Clinical Pathology at the Baltimore Medical College, etc. Sixth Edition. Thoroughly Revised. Illustrated with 177 Engravings and 24 Plates in Colors. Octavo. Cloth. Pp. 682. Lea Brothers & Co., Philadelphia and New York. 1907.

**A Text-Book of Physiology.** By Isaac Ott, A. M., M. D., Professor of Physiology in the Medico-Chirurgical College of Philadelphia. Second Edition. Revised and Enlarged. Illustrated with 393 Half-tone Engravings, many in Colors. Royal Octavo, 815 pages Cloth. Price, \$3.50, net. Philadelphia: F. A. Davis Company, Publishers. 1907.

**The Practice of Pediatrics.** In Original Contributions. By American and English Authors, Edited by Lester Carr, A. M., M. D. Consulting Physician to the French Hospital, New York; to the New York Eye and Ear Infirmary; Visiting Physician to the New York City Children's Hospitals and Schools, etc. Illustrated with 199 Engravings and 32 Full-page plates. Octavo. Cloth. Pp. 1014. Philadelphia and New York: Lea Brothers & Co.

**Practical Diagnosis.** The Use of Symptoms and Physical Signs in the Diagnosis of Disease. By Hobart Amory Hare, M. D., B.Sc., Professor of Therapeutics in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical Hospital; One Time Clinical Professor of Diseases of Children in the University of Pennsylvania, etc. Sixth Edition. Revised and Enlarged. Illustrated with 203 Engravings and 16 Plates. Octavo. Cloth. Pp. 616. Philadelphia and New York: Lea Brothers & Co. 1907.

## Books Reviewed

**International Clinics, A Quarterly of Illustrated Clinical Lectures and Especially Prepared Articles on Treatment, Medicine, Surgery,**

Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, etc. By Leading Members of the Medical Profession Throughout the World. Edited by W. T. Longcope, M. D., with the collaboration of W. Osler, M. D., J. H. Musser, M. D., A. McPhedran, M. D., and others. Vol. III. Seventeenth Series. Cloth, pp. 296. Price, \$2.00, net. Philadelphia and London: J. B. Lippincott Company. 1907.

The third volume of this valuable series contains twenty-five contributions in the various departments. Worthy of special mention are the following: "Curability of Tuberculosis," by E. S. Bullock, of Silver City, N. M. The doctor cites his own case in testimony of his subject, and states that he has been perfectly well for ten years. Much of interest is incorporated in the article on "Mechano-therapy," by John W. Wainwright. "Inoculability of Tumors and the Endemic Occurrence of Cancer" is the title of a paper embodying the researches of Leo Loeb. "The Etiology and Experimental Study of Syphilis" is an interesting resumé of the late work upon this absorbing subject.

The book is well illustrated, and that the same style of printing and binding is maintained as in previous numbers is commendable.

**Surgery of Genito-Urinary Organs.** By J. W. S. Gouley, M. D. Demy 8 vo., 531 pp. Price, \$3.00. New York: Rebman Company.

In this little volume the author has presented a collection of notes on the nature, diagnosis and treatment of some of the diseases of the genito-urinary organs that come within the province of surgery. The subject matter is most charmingly presented and the difficulties of correct diagnosis and prognosis of this troublesome class of cases are stated in a clear, logical, concise and conservative manner which carries conviction. The chapter on Chronic Urethritis is especially hopeful and is well worth careful perusal. One cannot fail to be impressed with the conservative manner in which the author deals with prostatic disease, the same conservatism pervading the very valuable chapters on Bladder Stone, Hemorrhage, Bladder Tumors and Uro-Cystitis. The anatomy of the genito-urinary organs is accurately and concisely presented and the pathology is sufficient for even the ultra-scientific. It is a good book to have, for much of value is contained in little space. A. S.

# COLORADO MEDICINE

PUBLISHED MONTHLY BY THE COLORADO STATE MEDICAL SOCIETY.

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Annual Subscription, \$2.00.

Single Copies, 20 cents.

All communications to this publication must be made to it exclusively. It will be more satisfactory to all concerned if contributions are typewritten.

Communications and items of interest are invited from all parts of the state. Death notices, removals, changes of address, etc., are especially desired.

Secretaries of the County Societies are earnestly requested to report their meetings, including the subject matter of the papers presented, and in general, the substance of the discussions.

Marked copies of local newspapers, or clippings, containing matters of interest to the profession will be gratefully acknowledged. The name of the sender should be given.

The journal will be issued on the 15th of each month. All copy must reach the editor not later than the first of the month. Advertisements of proprietary medicines will be accepted provided the preparations advertised have been approved by the Council of Pharmacy and Chemistry of the American Medical Association. Address all communications regarding advertising to

JAMES M. BLAINE, M. D., *Adv. Mgr.*, 3-4 Steele Block, Denver, Colo.

## IMPORTANT NOTICE.

All members of the Colorado State Medical Society are entitled to a copy of this journal each month. Failure to receive the same, and change of address, should be promptly communicated to the editor.

VOL. IV.

DENVER, DECEMBER, 1907.

No. 12

## Editorial Comment

### POST-GRADUATE COURSE IN COUNTY SOCIETIES.

In September of this year Dr. J. H. Blackburn, of Bowling Green, Ky., acting under the National Organizer, Dr. McCormack, presented an outline for the post-graduate course to be followed in county medical societies. It was intended to have the entire course cover four years and then to repeat it. As was stated, it was much in the nature of an experiment, and intended as a suggestion to county societies for consideration and modification. To quote from the *Councilor's Bulletin*: "The thought of an organized medical profession, over 70,000 in number, forming a vast, self-established, self-taught school for post-graduate instruction for the improvement of the individuals, earnestly striving to increase the usefulness of each member and to make him of more value to the profession and to the public, is most inspiring."

According to the *Journal A. M. A.*,

twenty-nine county societies in eight states have adopted the course of study. The last report of the Boulder County Society shows that the program is in the hands of their regular committee.

It is to be hoped that more will follow, keeping up the good work of raising the standard of the higher medical education of practitioners.

### SOME OF OUR NEEDS.

It is well to keep in mind some of the urgent needs of Colorado in advance of the next session of the legislature.

We feel quite sure that could the senators and legislators see, as do the practitioners of medicine, the many epileptic patients which are within our state, they would soon realize the advisability of a state institution for their care, instead of confining them in institutions for the insane.

Another class of indigent poor who fill our public hospitals to the exclusion, or at least interfering with the proper care of more urgent cases, are the incurable paralyzed and paretic.



That these two classes can be cared for in one institution has been shown by the National Hospital for the Paralyzed and Epileptic in London, and it is for such a hospital in Colorado that all conversant with the facts must feel the need.

With the growth of our population, we are seeing more defective children, who do not do well in school, and are finally dropped out owing to lack of mental ability to advance, and who rapidly decline when thrown upon their own resources, and often become criminals. It is not a matter of doubt today as to what vast good that can be accomplished by special careful training of these inhibited minds, and an institution for the care of mental defectives is another one of the state's needs.

Our State Hospital at Pueblo is large, but not large enough. The time must come when a state covering an area of 103,000 square miles will require more than one such institution, and we believe that time has arrived. There should be a movement started toward the establishment of a state hospital for the insane in the northern part of the state.

It is time now to begin to think of these needs, and so talk about them, especially to those who represent the various districts of the state at the next session.

#### *THE NEXT ANNUAL MEETING.*

The work incident to the next meeting of the state society has started. The Scientific Work Committee has already formulated the plan, much the same as that of last year. The date of the meeting has been fixed.

In a circular letter, the secretary, Dr. Black, calls attention to the fact that only sixteen "representative" papers can be given space on the general program.

It is expressed that it should be sufficient honor for those delegated to represent their society upon the program to warrant the writing and reading of a

paper; that it is an honor bestowed by the constituent society, and not the state society. It is also suggested that an alternate be chosen.

The section program will be limited to thirty-two papers, and that application should be made for these at once.

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#### *IMPORTANT NOTICE.*

The next meeting of the Colorado State Medical Society will be held in Denver, on October 6, 7 and 8, 1908. The sessions will be from 10 a. m. to 1:30 p. m. One day will be devoted to section work. There will be four sections working at the same time, and there will be room for eight papers in each section, or thirty-two in all. The names of the sections will be, Section on Surgery, Gynecology and Orthopedics; Section on Medicine and Neurology; Section on Pediatrics, Contagious Diseases and Sanitary Science; Section on Ophthalmology and Oto-Laryngology. If a member desires to prepare a paper for one of these sections, application should be made for a place at once. It is not absolutely necessary to give the title of the paper now, but we would like a designation of the section in which the paper would belong, and the title of the paper should be submitted as soon as possible. It is important to remember that the number of places are limited, and first come first served will be the policy of assignment.

MELVILLE BLACK, Secretary.

Dr. F. W. Kenney,

Dr. Saling Simon,

Dr. Melville Black, Secretary,

Committee on Scientific Work.

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Owing to the failure on the part of the stenographer, who was employed to report the Section on Internal Medicine and Neurology, to forward the report to the secretary, the papers read in that section will be published without discussion.

## Original Articles

### ACUTE BRONCHO-PNEUMONIA.

By J. G. HUGHES, M. D., Greeley, Colo.

Acute broncho-pneumonia is essentially a disease of infancy and early childhood and is most frequent in young and poorly nourished infants. It runs no typical course; it may terminate fatally in twelve hours, or may last several days, or weeks.

Some few points on the gross anatomy and physiology of the lungs may aid in presenting this subject for consideration.

It will, however, be impossible in a short paper to cover all of the phases of the various groups into which the disease is usually divided; so we may select from its multiplicity of forms the uniform lesion; capillary bronchitis with involvement of the terminal bronchioles.

The lungs are grape-like glands whose excretory ducts or tubes communicate with the trachea, pharynx, naso-pharynx, nares, and with the external world. These cavities are open, rendered so by their bony and cartilageneous formation, the latter in its characteristic form extending to all tubes greater than one millimeter in diameter. (The necessity for this arises in the varying degree of pressure in the different phases of the respiratory act varying from 50 mm. in normal inspiration to + 76 mm. in ordinary expiration.)

The small bronchi are distinguished from the large bronchi by the presence of circular muscular fibers and the absence of cartilage and mucous glands. The epithelium is also less developed. By reason of the high degree of elasticity of the lungs the different layers of the plura are normally in apposition and remain so during respiration.

The alveoli are protected by the narrow lumen and bending of the air passages modifying the temperature of the respired air, while the mucous and ciliated epithelium tend to filter and free it from foreign particles and germs.

Upon auscultation, two distinct sounds are heard over the lungs and air passages, viz.: the vesicular and bronchial.

During the inward excursion there is produced in the air vesicles a soft sighing sound, heard best at some distance from the trachea and the larger bronchi (louder in the child than in the adult, because the air cells are narrower), and increased in intensity at the termination of the inspiration.

The inspiratory act is longer than the expiratory, and the sound of the latter is lower pitched and rustling or blowing in character. These sounds are readily distinguishable from the sharp aspirating sound heard in both inspiration and expiration over the larynx and in the supra-sternal notch which is propagated down the trachea and bronchi with diminished intensity constituting the bronchial sound.

When all parts of the lungs are equally elastic, expansion and contraction takes place regularly and harmoniously, but where the elasticity is interfered with, obstruction, more or less marked to the ingress and egress, is produced

The platulous tubes permit ready ingress and egress of the respired air of variable temperature, inhalations of dust, germs and irritating substances. Particularly with mouth breathing such conditions may cause inflammation of the bronchial mucosa, especially where the system has already been weakened by rickets, or some acute disease; under such conditions there is a thickening of the vesical walls; the mucus which lines the bronchial tubes becomes loosened and de-

tached as may also the epithelial cells lining the tubes.

The tubes, deprived of their protecting mucous coating, become dry at first; later there is an excessive secretion of mucus and muco-purulent exudate from the tubes, whereas they formerly only produced the amount lost from the surface by evaporation. The inflammatory process extends by continuity of tissue, or the detached mucus with cells and exudates from the tubes may be aspirated back into the terminal bronchioles and air-cells, or the cells themselves may be the seat of the inflammatory exudations containing the well-known products of inflammation. Thrombosis and atelectasis may supervene upon this condition, as may also emphysema, which may be either vesicular or interstitial, but it is usually of the vesicular type. The emphysematous zone surrounds the consolidated area and is due to obstruction of the expiration from the swelling and mucus secretion in the bronchial tubes, and tends to prevent the early recognition of the consolidation on percussion. The germs present are pneumococcus, *Freidlander's bacillus*, streptococcus, staphylococcus, the diphtheria bacillus, and others, but just what part each plays and what symptoms each produces is not known, as the symptoms and conditions vary in different cases irrespective of the invading organism. The disease may be primary or secondary. Usually it involves both lungs and is variable in outline.

The face is dull and suffused, the degree varying to cyanosis and depending upon the amount of lung tissue rendered functionally inactive by the inflammatory process reducing the supply of oxygen and decreasing the elimination of carbon dioxide. There is also a physiolog-

ical increase of carbon dioxide in the child as compared with the adult.

Dyspnea is an early and rather constant symptom. It is aggravated by abdominal distention and exercise or excitement. The *alae nasi* are dilated and there is a marked retraction of the intercostal spaces. Frowning is more frequent than crying. The respirations are rapid, from 50 to 70, or higher. Many authors mention a pause after inspiration instead of after expiration (though the latter is disputed). I have never been able to detect such pause except in cases associated with pleurisy, where the inspiration caused a painful pleuritic friction, abruptly terminating the inspiration with an accompanying pause of short duration. Friction sounds are rare. The Cheyne-Stokes' type of respiration is occasionally found.

The rales are those of the accompanying bronchitis, the character or form depending upon the location. In the larger tubes coarse, moist, or bubbling rales are to be heard. These are few in number; as the bronchial inflammation extends from the larger to the smaller tubes there is a gradation in the character of the rale heard, from the coarse moist to the fine moist rales whose presence is of more serious import as they show the involvement of the smaller tubes. I do not wish to be understood as saying that the sound is governed by the size of the tubes alone.

Localized subcrepitant rales are of value if found.

Descriptions of the disease usually contain the statement that dulness can readily be detected over the base of both lungs posteriorly. Detection of dulness has served to confirm the diagnosis, rather than to aid in making it, as I have rarely been able to elicit dulness until after the diagnosis was reasonably certain. The blood vessels of the bronchial tubes



are abundant and very loosely connected with the muscular structure favoring engorgement, whether from infection, irritation or temperature. An emphysematous condition is certain to result from obstruction to expiration which will render detection of small consolidated areas difficult, if not possible, until the emphysematous area is lessened or the consolidated area increased. A short, hacking cough is frequently present; sputum is unreliable, as it is usually swallowed. loss of flesh is rapid.

It is needless to dwell upon the importance of an early diagnosis. Anyone who has ever witnessed the rapidity with which it is possible for a fatal case to terminate will never question it. The disease has to be distinguished chiefly from bronchitis, lobar-pneumonia, and tuberculosis. It is most likely to escape notice where there has been an antecedent bronchitis. The usual favorable terminations in this condition may cause the observations of the attending physician to be of a purely perfunctory character and herein lies one element of danger.

The first thing which usually attracts attention to an extension is the expression of the face, the red or injected appearance giving way to the pinched cyanotic expression, with prominent eye-balls already noted. There is a change in the character of the rales from the coarse to the finer. Vesicular breathing disappears over the involved area and bronchial breathing is heard instead. All of the symptoms are intensified. Judgment may be at fault in not recognizing the extension, but it should not be due to carelessness. In lobar pneumonia Wiel's sign, lack of expansion in the sub-clavicular region is usually present but its value in differentiation here is not great, or at least has not served to any great extent.

We must rely principally upon the sudden onset of the abdominal pain, which is unusual at this age; also the age of the patient and the difference in the physical signs, although these may be misleading where both lungs are involved. Fortunately it is frequently unilateral.

In attempting an early differentiation between broncho-pneumonia and tuberculosis, it is well to remember that we have no signs which are pathognomonic of either disease. Nevertheless, if we keep in mind the fact that tuberculosis in the vast majority of cases attacks the apices, while broncho-pneumonia almost invariably attacks the bases of both lungs posteriorly, it will aid us materially in differentiating. Other diseases than tuberculosis attacks the apices, but it is never confined exclusively to the apices. The history of the onset and physical findings may be identical or we may find glandular signs which will determine the diagnosis.

Occasionally in vomited matter containing sputum on microscopic examination we may find tubercle bacilli or elastic-tissue fibers, either of which would determine the nature of the malady.

The *prognosis* depends upon the age, the amount of lung involvement, the existence of other diseases to which this is secondary as well as the condition of the nervous system and the ability to take and assimilate nourishment.

*Treatment:* Not having heard from the pharmaceutical houses as to what particular three-ounce bottle containing an attenuated combination of drugs with a pleasant taste and euphonic name whose contents is the specific, I am unable to suggest any treatment of a specific nature. I wish to apologize to the society for my ignorance where enlightenment is so easy, but the rival claims of Eddyism of which in our professional

meetings we have heard able exponents, left me in doubt, and in the period of indecision I lost the psychological moment of discernment as to when to specify specifics and when to suggest suggestions. This dropped me back into the class which must bear the stigma of being non-progressive, consequently I can only offer physiologic and text-book therapeutic measures for your consideration, and the most important of these is prophylaxis. Proper care of the child in the home, which includes proper nourishment, clothing, exercise, air and sunshine; these are important during health and illness.

Elimination of the bowel at once is necessary to prevent interference with the diaphragm on account of intestinal gasses.

Laxatives should be continued throughout the course of the disease, and calomel is one of the best; others are also frequently indicated.

Pain and cough are more safely controlled by means of ice than by opiates where it is at all possible to do so.

Opiates are never well borne by children and if pushed to the point where they allay pain there is danger of drying and rendering viscid the exudate in the lungs and reducing the irritability upon which elimination depends whereby drainage is retarded. Digestion is as a rule impaired and the opsonic index is said to be lowered.

Inhalations should be used more frequently and expectorants are of doubtful value.

Stimulants and bathing are indicated in most cases. Anti-pneumococcic serum has not as yet been proven an efficient aid to our armamentarium. There are, however, hopes of development along this line, but not to a certainty.

Poultices are objectionable, not so much so on account of their weight, as they are applied posteriorly, but such

treatment is homoeopathic, adding heat to fever and preventing heat elimination to some extent. The tendency of such treatment is to favor bacterial development in the body and make an incubator out of the child.

Evaporating lotions and cold compresses which extract heat may be useful, and at times ice is strongly indicated, as it allays pain and the irritation of the nervous system and helps to control the temperature. Nursing and judicious management and close observation may aid us in saving cases that would otherwise be lost.

#### Discussion.

Dr. W. H. Swan: Dr. Hughes' paper has covered the ground so fully, and the time is so short that I will say very little indeed. The interesting statement of Dr. Holt in regard to the relative frequency of bronchial and lobar pneumonia in children I will refer to. He quoted 370 cases during the first two years, of which 25 per cent were lobar, and 75 per cent were bronchial. The very important point in diagnosis is, I think, the frequent paucity of physical signs, particularly consolidation. To quote more fully he reports 166 cases in his hospital, in which there were no signs of consolidation, and, as Dr. Hughes stated, a very important thing in the diagnosis between the two forms of pneumonia is the relative frequency of the disease in the two lungs in bronchial, as compared with lobar pneumonia. Another point is the relative infrequency of lobar pneumonia compared with bronchial in children, and particularly those under three years of age; also the gradual onset of the pneumonic process after the bronchitis has developed. Then the course of bronchial pneumonia is very atypical, whereas the other is typical. One usually terminates by lysis, and the other by crisis. In bronchitis it is often very difficult to say whether there is a bronchial pneumonia, or a capillary bronchitis, but the steady increasing temperature, and increased prostration are signs which would lead one to be sure there was more than a general bronchitis. In bronchitis the temperature after thirty-six or forty-eight hours is usually materially lowered. Holt says that if the temperature continues to rise above 103

for three consecutive days one would be pretty sure of bronchial pneumonia. A prognosis can be given usually if the temperature is very high or fluctuating. A very fluctuating temperature is probably indicative of mixed infection, and is most likely the streptococcus. Of course in the very feeble and young the prognosis is bad. Holt makes a particular point of the late nervous symptoms in broncho-pneumonia. The question of digestion is of immense importance.

As to the treatment, the only thing I would like to speak of is the use of the mustard bath. In a case I saw recently, the child was extremely ill, very restless, and had a very rapid respiration and pulse. In that case the use of the mustard bath gave a very remarkable result. The child, instead of being cyanotic and twitching, very soon became quiet, and improved in color. I think the bath was used five or six times within thirty-six or forty-eight hours, each time with very marked relief. Four or five tablespoonfuls of mustard were stirred in a gallon of tepid water, which was warmed by the addition of warm water to 105 degrees.

Dr. Kate Lindsay: I have treated capillary bronchitis in children, and my one requirement was fresh air. Many children, especially in the country, are suffocated. I will give you an illustration. About ten years ago I was called out into the country to see a child ten months old, apparently in an extreme condition of capillary bronchitis. I went into the room and found the windows covered with blankets. There was a base-burner, with dampers all down, and two oil lamps, also turned down. The child was cyanotic, ready to die, and the neighbors were there to see it die. I horrified them by ordering the dampers opened, and also the windows. The child got better in fifteen minutes. I then examined it and found that it was covered with heavy flaxseed poultices, and plenty of oil. I brought a nurse with me, and we got a bath ready. We gave it plenty of fresh air, and although the case was critical, the child recovered.

Dr. E. Stuver: There is one point I desire to call attention to, and that is the elimination question. I have found great improvement to follow the rectal injection of salt solution after the bowels were washed out thoroughly. You can use half an ounce, or as much as the child will retain, and this in a short time will reduce the temperature, and

cause profuse perspiration. The child will become quiet, and probably go to sleep. At the same time I take a mild solution of the sulphate of magnesia, and sponge off the surfaces of the body, thus giving a chance for more poison to get out. Then, if necessary, I take a solution of quinine and alcohol, and apply it as usually applied in case where an alcohol rub is required. I believe measures like this will do more good than a whole lot of strong medicine, although as indications arise I administer internal medicine, but rely more on fresh air and elimination.

Dr. O. P. Shippey: I want to mention an important negative matter that may possibly save life. Those of us in the country have cases brought to us several miles. Infants are easily taken around, but grown persons would prefer to be left at home. I have had cases almost dead with broncho-pneumonia brought into my office. We sometimes tell the people carelessly to bring the patient in to us, and in that way we are sometimes indirectly the cause of fatal results. I would rather take chances in giving directions for the parents to carry out, or go considerable distance to see the patient rather than have them brought in as office patients when the trip itself is liable to be fatal.

Dr. J. R. Arneill: Two years ago I had a case of broncho-pneumonia where the temperature on four or five successive days rose to 104 or 105, and it dropped to 97 or 98. It did this so frequently that I made a careful and complete examination, but did not find malarial organisms. This shows how we may have wrong impressions sometimes in regard to the diagnosis of these cases.

Dr. H. B. Whitney: I want to say a word in favor of fresh air, and I think there ought to be a crusade by the members of this society in favor of the fresh air treatment of pneumonia, and particularly broncho-pneumonia. In a recent case, with high temperature and rapid respiration, the child was put out of doors for the whole of twenty-four hours in a crib, and the immediate improvement which followed was remarkable. The temperature fell within two or three days, and the child was practically well, although the fever had been running for a long time.

We ought to urge the open air treatment, and I would also lay emphasis on the external treatment rather than to administer large quantities of nauseating drugs.

Dr. G. H. Cattermole: I would like to em-



phasize the use of the mustard bath. If the child is seen early it may abort the case.

Dr. H. G. Garwood: I would like to ask Dr. Hughes, in closing the discussion, to take up more fully the treatment by inhalation.

Dr. Hughes, closing the discussion: The sins of omission in my paper are too numerous to mention. I merely touched upon things to be used in the hope of stimulating discussion. Fresh air has been mentioned, and of course at the present time we are all applying it more frequently than formerly.

I am obliged to Dr. Swan for the suggestion regarding the mustard bath. I can see the practical utility of such a measure.

In regard to inhalations, I have used them to a certain extent, because I do not believe in internal medication to any great extent in bronchial pneumonia. I use laxatives, enemas of all kinds, baths of all kinds, and as little internal medicine as possible. You can give expectorants sometimes with a soothing effect produced by inhalations; for instance, creosote or other remedies. They allay the irritation to a certain extent, and probably facilitate the readiness with which the expectoration is swallowed.

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### *TREATMENT OF PNEUMONIA.*

By CARL JOHNSON, M. D., Montrose, Colo.

For the purpose of this paper, I shall include as pneumonia, all acute, inflammatory affections of the lungs characterized by fever, pain, and spitting of blood, in a previously healthy person.

It is doubtful whether the old classifications of the disease are applicable, clinically, at the present time. The consensus of opinion seems to be that the character of acute lung inflammations has altered in recent years. There are more abortive and irregular cases than formerly and the typical cases of pneumonia, limited by the boundaries of the lobes and running a regular course, are much more infrequent. This must be borne in mind in considering the treatment to be presented. It is advanced as a treatment which has given unusually good results in the hands of my father

and myself for several years, and consists principally in the use of rather small doses of ergot and the bromides.

It will be generally admitted that pneumonia is caused by a general systemic infection, the principal manifestation of which is an inflammation of the mucous membrane of the air cells. This inflammation is different from that occurring in the bronchial tubes in that it does not form an exudate which is excreted and thrown off by expectoration, but one which is removed largely by absorption. The exudate comes from the venous blood circulating in the branches of the pulmonary artery. When the stage of resolution is reached, this exudate softens, is disintegrated, and is carried into the general arterial circulation, to be thrown off by the excretory organs of the body.

The condition of the lung in the first stage of every case of pneumonia is one of congestion. Some cases never go beyond this stage, and it is impossible to say, from their clinical or microscopic examination, which cases will go on to consolidation and which will stop short of that stage and prove to be a case of what is known as acute pulmonary congestion, or abortive pneumonia. The reason for these abortive cases would seem to be accounted for in the resisting power of the lung tissue rather than in the virulence of the infection, as the symptoms at the onset are quite as severe in the one class of cases as in the other.

A line of treatment, then, which would temporarily increase the resisting power of the affected lung, would seem to be the rational mode of combating the disease in its first stage, and one which would increase the number of abortive cases.

How and why does the lung become congested? The arterioles and capillaries are dilated and engorged. Which is cause and which is effect, the dilatation or

the engorgement? Is the pressure of the oncoming blood from the heart sufficient to enlarge the calibre of the arterioles, or is it not more in accordance with our knowledge of the subject to suppose that the increased amount of blood simply flows into the arterioles which have already become dilated through an abnormal condition of the vasomotor system? This abnormal condition of the nerve supply is caused by a certain germ or germ product in the organism. It is not necessarily caused by the presence of that agency in the lung itself, but rather by its action on the nerve center controlling or regulating the circulation of the lungs.

As an example, opium contracts the pupil, and belladonna dilates it; they do not do this by coming in contact with the iris, but the results are produced by their effect on a central station.

If the infection causing pneumonia, acting from the central station which controls or regulates the condition of the lungs in health, can produce a disturbance in the lung by the dilatation of the vascular structures, producing the disease called pneumonia, then theoretically, the ideal remedy is one which by its action on that nerve center produces the opposite effect, or contraction of those vascular structures.

Judging from its known therapeutic action, we should expect more from a judicious use of ergot than from any other known drug. It has a specific action upon non-striated muscular fibre, and especially on such fibre when it is exhausted or defective.

Livingston, in the *Medical Record* of July 12, of this year, states: "The only medicament of which I know that has a tonic effect upon the defective, unstriated fibre, wherever situated, is ergot," \* \* \* And again: "It is quite certain that inflammation cannot

develop or continue unless there is a congested circulation; also, that such relaxed state of unstriated fibre can be prevented, corrected or modified, and I, therefore, hold it to be entirely rational to make use of by means that have been demonstrated to be effective for such purpose." He further states: "I have long believed that the irritative development of bacteria in relation to local inflammations is chiefly the result of the relaxed state of the blood-vessels of those localities, and that if a degree of tone of the unstriated fibre of blood-vessels is secured which will prevent their dilatation to the extent of congestion, such irritative development of bacteria will not occur; also, that even when such congestion and irritative development of bacteria have occurred to the extent of typical inflammation, a prompt and proper effort to develop tone in those dilated blood-vessels will often abort, or at least distinctly limit the extent of the inflammation."

The bromides, in small doses, are said to contract the arterioles. They exert a sedative effect upon the functions of the brain and allay irritability of the sensory nerves. It may not be easy to explain just how the bromides aid the action of ergot in pneumonia, but we have satisfied ourselves clinically, that the two together act more beneficially than either alone. After trying the various bromide salts alone and in combination, we have concluded that the bromide of sodium gives rather more satisfactory results than any other. It is also less disagreeable to the taste.

The patient, when first seen, is put on hourly doses of fluid extract ergot min. 4, with sodium bromide grs. 4; these quantities being varied somewhat in different cases, the ergot being increased if blood is being expectorated freely, and the bromide increased if pain is the predominating symptom. A mercurial

purge is usually given, and codeine, if necessary for excessive pain. A cotton jacket is applied to the chest. In a majority of cases, an opiate is not needed for the pain after three or four hourly doses of the ergot and bromide. The blood in the sputum becomes less in quantity and often disappears entirely in from six to twenty-four hours. The temperature drops to nearly normal. The pulse follows to a certain extent, but the respirations may remain rapid for several days. One of the most marked effects of the treatment is a decided decrease in the amount of expectoration. The decrease in the sputum was watched very closely, and with some misgivings, in the first few cases treated; but as all other symptoms indicated an improvement, the treatment was continued. No doubt this is the direct result of contraction of the abnormally dilated capillaries.

In one of the first cases in which this treatment was used, a typical case of lobar pneumonia in a robust man, first seen on the third day, he called attention to the large amount of sediment which appeared in the urine as the expectoration decreased. This may often be noticed. It is well known that a largely increased quantity of urea is excreted during the two or three days following the crisis in pneumonia. It is suggested that the change produced by the ergot and bromide is similar to that which takes place at the time of the crisis.

For convenience in our hospital work, we keep in stock an ergot and bromide solution to which we have given the arbitrary name "Bromergotol." This solution is palatable and can be kept for a considerable time without deterioration. The following is the formula for a pint:

Sodium Bromide,  $\mathfrak{z}\text{j}$ .  
Fl. Ext. Ergot,  $\mathfrak{z}\text{j}$ .  
Alcohol,  $\mathfrak{z}\text{j}$ .

Glycerine,  $\mathfrak{z}\text{ij}$ .

Aqua, p. s., oj.

Sig: Teaspoonful every hour or as directed.

As soon as the effect of the hourly doses is shown by the lessened pain and expectoration, the interval between doses is lengthened to two or three hours, and continued in this way for several days. We have repeatedly had a return of pain, bloody sputum and rise of temperature on discontinuing the remedy, and had them promptly disappear on resuming its use.

The treatment seems to work equally well with children and adults. Alcoholics respond rather poorly to this, as well as other treatments, although even these cases do well unless a large area of lung is involved. We have treated by this method twenty-one cases among men employed on tunnel and canal construction work, a notoriously bad class of people as far as pneumonia is concerned, with one death. This was a markedly alcoholic old man with a rapidly fatal involvement of both lungs.

In our private practice we have had two deaths, one an elderly lady who had been an invalid for years, and the other a child of one and a half years, who partially recovered from a first attack, and afterwards succumbed to an invasion of the other lung.

It must not be supposed that we neglect other remedies, such as fresh air, which is of paramount importance, strychnia, digitalis, alcohol, and other drugs which may become of use in the later stages. These have not been dwelt upon because they have already been discussed many times, and it was thought preferable to spend the time allotted in discussing this comparatively new feature in treatment.



### Discussion.

Dr. A. J. Robinson: Dr. Johnson has certainly given us the pathology and progress of the early stages of pneumonia, and our knowledge of ergot would cause it to be indicated more perhaps than any other remedy. It is not a new theory, but has been recommended years ago in these cases in short and frequent doses. As for the bromide, I have never used it in treatment, but often for the restlessness which accompanies these cases.

I have jotted down a few of my experiences with quinine and iron treatment, and had intended to read them, but the discussion has been limited to three minutes, and my paper could not be read in that time. I will say that I have tried the treatment in ten different cases, and have been surprised and pleased to find that such immense doses of quinine can be given with so little depression, and so little tympanites. In those ten cases I lost two, but they were old drunkards.

Dr. O. M. Gilbert: I think Dr. Johnson struck the keynote in his treatment of pneumonia. While it does not work in old age or infants or alcoholics, still that is about the history of all treatment of pneumonia. There is one objection, theoretically in view of Bier's recent work on hyperemia. We have been taught that hyperemia may have a purpose, and it seems to me that this condition of the lung is only a very small part of the pathology of the disease, and that the condition may have a direct therapeutic purpose instead of deleterious effect. I tried quinine treatment in several cases, apparently with first class results, but my experience is entirely too limited to be of any special benefit.

Dr. W. W. Wilkinson: At Silverton, 9,300 feet, we find we have to get busy with pneumonia. If you don't get the case within the first twenty-four hours, you don't do much with it. I have tried the Galbreath treatment, but did not get satisfactory results. I have used small quantities of quinine also, but never used it in large doses. The ergot treatment is new to me. I do not believe a man contracts pneumonia from one exposure if he is in perfect condition. I have found in some cases where I have tried elimination through all the passages, even using salicylates, that I have overdone the matter. I think the moderate use of bromide is beneficial.

Dr. E. W. Lazell: I had forcibly called to my attention a short time ago, a statement

in which the writer referred to the very large percentage of cases of diseases of the nervous system in which the exposure to cold was quoted as one of the existing causes, and shortly after I was reading an article in which the positive statement was made that after exposure to cold, the patient might lose as many as one-half of his red corpuscles, thus reducing the number to somewhere in the neighborhood of two and one-half million per cubic millimeter. If exposure to cold is followed by such a reduction, then that explains perhaps the production of pneumonia. If that is true, and we follow out the rational treatment of pneumonia by giving ergot, which, if my therapeutics are sufficiently well grounded, is a contractor of the peripheral arterioles, we thereby increase the amount of peripheral resistance, and the contracting of the arterioles would be of benefit to the organism by increasing the thickness of the blood, so to speak. The watery portion of the blood would be eliminated by increasing the peripheral resistance on the part of nature to bring the number of corpuscles up to somewhere near the normal amount. If that is true, ergot would certainly be indicated to get rid of the poison and watery portion of the blood. It seems to me this might be a possible explanation of the problem.

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### PNEUMONIA IN INFANTS.

By W. T. LITTLE, M. D., Canon City, Colo.

In preparing a paper on the pneumonias of infants, I have not done so with the thought of adding anything new to the subject, but rather to review briefly and clinically an affection of early life whose frequency and importance furnish the excuse.

I have purposely omitted the pathology of the disease, and avoided much detail in the symptomatology and treatment, incorporating with brief references to the literature on the subject my own views and experiences.

Infancy is defined as "that period from the end of the first month until all of the milk teeth have appeared, which is about the end of the second year."

Certain anatomical peculiarities of the lungs exist at this period, which account for the preponderance of the bronchial type of the disease. "As compared with the adult the trachea is larger, the bronchi are larger, more numerous and occupy a greater space; the air cells are much smaller and occupy less space, and the interstitial tissue is much more abundant." (Holt 1.)

In Colorado croupous pneumonia during the first year of life seems to be rare, but is not uncommon in the second year. It is caused by the pneumococcus, is almost always primary, and shows no predilection for delicate children.

Clinically, it departs but little from the same disease in the adult. Infants, however, rarely have chills, but may have convulsions. It is frequently ushered in with vomiting; commonly, however, fever and cough are the first symptoms. Diarrhoea may appear early, the result of indigestion and if associated with vomiting, may fatally terminate the attack. Cough, while usually an early symptom, may be slight for the first day or two. Expectoration, of course, is absent. Pleuritic pain is common, and is manifested either by the cry or more commonly by the expiratory grunt and suppressed breathing. When the right base is affected the pain may be referred to the right iliac fossa, suggesting appendicitis.

The physical signs of consolidation are often slow in appearing. In one of my cases, a boy of two years, the child of a physician, who had suspected pneumonia and had examined the lungs repeatedly, signs of consolidation were not found until the sixth day, and then they were slight. It was not until two days later, or eight days from the onset, that all of the signs were present.

Weill calls attention to the lack of ex-

pansion of the sub-clavicular region of the affected side, and says it is an early and constant sign to be observed on the first day, and usually persisting throughout the attack.

The cerebral and nervous symptoms may be so prominent that the case is mistaken for meningitis. The accelerated breathing should cast suspicion on the lungs, and careful repeated examinations will usually disclose more or less consolidation. These so-called cerebral cases usually terminate by crisis, when all the symptoms rapidly disappear. True pneumococcus meningitis, when present, appears later, and seldom offers any difficulty in its recognition.

Acute lobar pneumonia usually terminates by crisis. (68.8 per cent Morse.) Fischer (2) speaks of a pro-crisis in which the temperature will suddenly fall to normal on the day preceding the crisis. He considers it has a valuable prognostic significance, showing that the inflammatory stage has now terminated. I observed this in one case, the temperature dropping from 105 1-5 degrees at 8 p. m to 99 3-5 degrees at 9 the following morning. By evening it had returned to 105 degrees, to be followed twenty-four hours later by the critical fall to 97 3-5 degrees.

Complications are rather common; otitis media, empyema, meningitis and pericarditis occurring in the above order of frequency. The mortality varies as in the adult, with the season and the virulence of the epidemic. Holt (1) and Fischer (2) place the mortality at 4 per cent. Morse (3) found it 23 per cent in a series of 118 cases, it being almost twice as great in the first as in the second year.

Holt (4) considers the prognosis almost invariably favorable when only one lobe is involved, no matter where the temperature, pulse and respiration go, provided

the child had previously been in fairly good condition. He believes too much stress is laid on the rapidity of the pulse and that the quality is more significant than the rate.

Broncho-pneumonia, unlike the lobar or croupous variety, is essentially the pneumonia of infancy. It occurs at all seasons, but 70 per cent of cases occur during the winter and spring. Unlike lobar, more cases are seen in winter than spring. Nearly half of my own cases occurred in January. When it occurs in summer it is oftenest as a terminal infection following the wasting diseases, such as ileocolitis and typhoid. It is both primary and secondary; when secondary it follows acute or sub-acute bronchitis, or one of the infectious diseases. In my experience the onset was always insidious, following a bronchitis, in infants under one year. All of my cases of primary broncho-pneumonia were of infants in the second year. Debilitated infants are especially prone to it. Bottle-fed infants are liable only in so far as they are more apt to be illy-nourished and rickety.

Wind and dust, so prevalent in Colorado during dry winters and springs, may have some causative influence. A. R. Goodman (5) finds that pneumonia in Mexico City (elevation 7,400 feet), where the winters are very dry, decreases during the rains and directly after.

W. F. Hassenplug, of Cripple Creek, in his report, gives rapid temperature changes, and cold, dry, dusty weather as the chief causes. Overcrowding and bad environment are also potent predisposing causes. As to the etiologic influence of altitude, *per se*, I am unable to get any evidence or opinion in favor of it.

Clinically, broncho-pneumonia differs considerably from the lobar variety. When secondary it is slower in develop-

ment, runs no regular course, ends by lysis and often relapses.

Signs of consolidation are not always present, noticeably in the "acute disseminated" variety following capillary bronchitis; but when present they usually appear by the end of a week—in the majority of cases showing by the third to the fifth day—about as early, on the average, as in lobar pneumonia.

When the consolidated areas are small, the auscultatory signs may be masked by subcrepitant and sibilant rales, but whenever these are localized, pneumonia should be suspected. An infant with bronchitis who shows a rising temperature and respiration much exceeding the normal respiration pulse ratio, 1 to 4, should be suspected of having pneumonia, although the physical signs are absent. In severe cases the duration is much longer than in croupous pneumonia, the fever and cough frequently lasting three or four weeks. It may become chronic, with tuberculosis as a sequel.

The mortality is higher, in my own practice 10 per cent. Holt (1) places it at 10-30 per cent in private practice. One of my correspondents in Cripple Creek places it as high as 40 per cent under two years of age, while another from Colorado Springs gives it not over 4 or 5 per cent. Accurate statistics giving the mortality at high and moderate elevations would be valuable.

Whether altitude affects the mortality is still *subjudice*.

W. H. Swan, of Colorado Springs, is inclined to the opinion that, if anything, the disease is less fatal in high altitudes.

A medical friend, formerly practicing in Cripple Creek, and whom I knew to be a well trained, careful observer, once told me that he considered a severe broncho-pneumonia in young infants so very serious at that altitude (9,000 feet), that his first effort was to get them low-



er; and I have seen infants arrive in Canon City from Cripple Creek with respiration 80 to 90 a minute, cyanotic and restless, in whom the picture changed to one of comparative tranquillity in so short a time after arrival that it seems to me impossible to explain it in any other way than as the result of change of altitude.

Sewall (6), writing on the influence of lowered barometric pressure, says: "It is worth noting that when one descends to the plains after a sojourn at a higher level, the demand of the body for oxygen for a considerable time decreases below the normal to an even greater degree than the oxygen consumption increased as a result of the ascent." Admitting the correctness of these observations, should not the temporary rest obtained by the infant with pneumonia through a descent to a lower level be sufficient often to tide it over a critical period in the disease when the vital centers are fast playing out? The statistics gathered by Hoagland, of Colorado Springs, by which he attempts to prove that the mortality from pneumonia is no greater at high than low altitudes, deals only with the disease in adults. It is not reasonable to apply the same conclusion to infants.

The treatment of pneumonia, irrespective of kind, is largely supportive. In no other disease is there so much temptation to over do, and our mortality rate will be lower under the sin of omission than of commission.

Keeping in mind the self-limiting characteristic of lobar pneumonia, fresh air and careful feeding, with the wet pack for hyperpyrexia, should constitute practically our entire treatment.

In the bronchial variety, certain conditions may have to be met by medication. Dyspnea, when due to an associated bronchitis of the fine tubes, may be

best relieved by the hot mustard pack, repeated as often as necessary. When the cough is incessant and distressing, Dover's powder in doses of grs. 2-3 to an infant one year old, repeated once in twelve hours if necessary, is effectual and harmless. The stomach and bowels often require more attention than the lungs, for vomiting, diarrhea and tympanites may terminate the little patient's life. If the heart and respiration show signs of flagging, strychnine and brandy, the former in doses of grs. 1-300 to a child a year old are satisfactory stimulants. An abundance of fresh, cool air, night and day, is of the greatest importance. In this the prejudice of the parents and friends may have to be overcome. With the open air treatment, as advocated by Northrup (7), of New York, I have had no experience, but one cannot read of his results without being favorably impressed. The custom of keeping sick infants in their buggies should be discouraged, particularly in this disease. It is like putting them in a padded box, which must interfere with the free circulation of fresh air. Frequent change of position is helpful, as any hypostatic congestion favors the spread of the pneumonic process.

Hyperpyrexia is less apt to occur than in the lobar form, but when present, should be combated with wet pack or cold enemas. After severe or protracted attacks of broncho-pneumonia, cod-liver oil is advisable, while a change to a warmer and more equable climate may hasten the convalescence in very delicate infants.

I am glad to note the growing opposition to the use of the cotton jacket. It is cumbrous and productive of no good. More objectionable still is the use of expectorants and inhalants. If persisted in the former are almost sure to upset the stomach, and interfere with

the proper nourishment of the infant; while the latter interfere with the free and unlimited supply of fresh air.

In closing, let me quote Northrup's humerous advice, on how to kill a baby with pneumonia: "Crib in a far corner of the room with a canopy over it. Steam kettle; gas stove (leaky tubing). Room at 80 degrees. Many gas gets burning. Friends in the room, also the pug dog. Chest tightly enveloped in waistcoat poultice, with temperature of 105 degrees. Poultice thick, hot and tight. Windows obstructed, doors shut. If these do not do it, give cold tar and anti-pyrities and wait."

#### Bibliography.

1. Text-book: Diseases of Infancy and Childhood.
2. Text-Book: Diseases of Infancy and Childhood.
3. Medical Record., Sept. 10, 1904.
4. Ibedeau.
5. Medical Record, Jan. 14, 1905.
6. Colorado Medicine, August, 1907.
7. Journal A. M. A., Vol. 47, No. 15.

#### Discussion.

Dr. Espey: Concerning the treatment of lobular pneumonia in infants, I believe the essentials are plenty of good air, absolute quiet, and strict attention to the bodily comfort of the child, with of course the necessary care to any complications. I have been thoroughly convinced of the great value of fresh air constantly admitted to the sick room, and the doing away with anything that would burden the child or interfere with perfect circulation.

Dr. Gill: I would heartily recommend the isolation of pneumonia cases in children. I find it almost as necessary as in cases of scarlet fever, for it is certainly contagious.

Dr. Cattermole: In advising the use of plenty of fresh air, nothing has been said about the temperature of the air. It has occurred to me that too cold air in cases of pneumonia is not good. It has been my custom to give as much fresh air as possible, but in cold weather to warm it before hand by allowing it to come first through heated room.

Dr. Melvin: There is one thing which has

come to my attention very forcibly in cases of infantile pneumonia, and that is the very good results of the liberal hot poultice. The use of mustard salve instead of the poultice is a very good suggestion, but often you have not the mustard salve at hand. It is probably better, when you can get it. In numbers of cases a child may be dying of internal congestion. Any poultice is good in such cases. It makes no difference what the poultice is, just so you get it there hot and get it quick. Of course there are cases that are different. Some times a child is in a delirium and has high fever. I have seen cases of that kind where rubbing with ice or putting in ice packs has given almost instant relief. The keynote to the whole matter is air and circulation, and plenty of it.

Dr. Little, closing the discussion: I regret that the very question which I had hoped would be brought out by my paper was evidently overlooked. That is the question of altitude being a factor in the treatment of pneumonia. Of course I do not believe myself that any material difference exists in places like Denver, Colorado Springs, Canon City, etc., any more than at sea level, but it is my belief that at altitudes of between 10,000 and upward it influences a case badly. That was to me the point I hoped would be brought out in the discussion. I do not believe that altitude is much of a factor in the pneumonia of adults, but I do believe it affects cases of pneumonia in infants.

### SYRINGOMYELIA, WITH REPORT OF A CASE.

By FRANK L. BARROWS,

[From the Pathological Laboratory of the University of Colorado.]

*History:* Mr. J. V., aged 63, was taken sick in July, 1903, with what was supposed to be rheumatism. The joints of the arms and legs, especially the knees, became much swollen and painful. There were periodic pains shooting through the limbs. In the arms these were general, but in the legs they were mostly localized in the knees. There was marked atrophy of the muscles, and great wasting of the tissues in general.

By November he was so bad that he

was unable to leave his bed, but before spring he became considerably better, although about this time contractures were noticed in the limbs. In June, 1904, he was admitted to a sanitarium, where a diagnosis of "tuberculous joints" was made.

The contractures became gradually worse, so that eventually the legs were drawn up close to the body and the arms were also much deformed. There was never a total paralysis of any of the muscles. No sensory disturbances were noted, but it seems probable that no search was made for them. Unfortunately, no very definite history of symptoms or physical findings could be obtained. Death occurred on May 23, 1907.

A partial autopsy was performed by Dr. Johnstone the day of death, permission having been obtained to remove the spinal cord only.

*Autopsy Record:* The body is that of a male, 172 cm. long. The beard is gray. The body is extremely emaciated. At the upper and middle third the thigh measures 21 cm. in circumference; the arms at the upper and middle third measure 13 cm. The ankles and feet pit slightly on pressure. The legs had been completely flexed and the joints ankylosed, so that the tendons had to be cut and the bones broken in order to straighten them. On the inner aspect of the left leg, 7 cm. above the internal malleolus is a superficial ulcer, irregular in outline, and covered by a dark reddish-brown crust. The longest diameter of this is 4 cm. Over the inner portion of the right foot is a similar area 1 cm. in diameter. Posterior to the external malleolus of the left leg is an ulcer 15 mm. in diameter. The probe can be passed beneath the superficial tissue downward for a distance of 5 cm., and in all other directions for a distance of 2 cm. A semi-purulent fluid can be expressed.

The arms are strongly flexed and rigid at the elbows and wrists. The finger joints are all ankylosed. At the wrist the hand is flexed and abducted. The interosseal muscles are markedly atrophied, and the fingers are decidedly drawn toward the ulnar side. The skin hangs in folds everywhere.

The costal angle is very deep and sharp. Both 10th ribs are floating. The central canal of the cord is dilated to a diameter of about 1 mm. in the upper lumbar and lower dorsal regions.

*Anatomic Diagnosis:* Syringomyelia; emaciation and general muscular atrophy; ankylosis of all joints of upper and lower extremities; ulcers of feet and legs.

*Histological Findings:* Section 1. Section of cord from lower cervical region. Kolchitky's stain.

The section shows a marked degeneration of the posterior columns, especially of the portion next to the posterior median septum (Goll's column). The neuroglia here is very much increased in amount, and the nerve fibres are fewer in number than normal, smaller in size, and do not stain so deeply as those in other areas. Some of the fibres appear simply as shadows, being scarcely distinguishable from the surrounding neuroglia.

The same evidences of degeneration are present in the lateral columns, especially in the crossed pyramidal and Gower's tract, but are not so marked here.

The gray commissure is practically obliterated by a mass of neuroglia tissue which contains considerable blood pigment and is apparently undergoing caseous degeneration. Near the center of this mass are two small blood vessels whose walls are much thickened. In the lumen of the vessels are a few normal appearing blood cells.



The central canal in this region has been obliterated by this growth, and only a few fibres of the gray commissure remain connecting the two columns of gray matter.

The lateral portion of the gray matter appear normal, except that many of the anterior horn cells are shrunken and deeply pigmented.

Section 2. Section from 4th dorsal cord. Kolchitky's stain.

The degeneration in the posterior columns of this section is not quite so marked as in the former, but here it extends farther out into the column of Burdach. The lateral columns are involved to a greater extent than in the former section.

The gray commissure has disappeared except for a few fibres in the anterior part, and a large irregular cavity occupies this portion of the cord. This cavity is surrounded by a zone of glial tissue which encroaches laterally into the gray columns for a short distance.

The cells of the anterior horns show a greater amount of degeneration than in the former section.

Section 3. Section from 8th dorsal cord. Kolchitky's stain.

This section shows about the same amount of degeneration in the posterior and lateral columns as No. 2. The gray commissure contains a mass of glial tissue similar to that in the cervical region, but the glia here is filled with blood pigment, and the blood vessels in the region are all packed with blood.

Sections of the same regions stained with Marchi's stain, or hæmatoxylin-eosin show nothing different, except that in the latter the central dilatation is seen to be surrounded by columnar epithelium for about four-fifths of its extent.

Section 4. Section of median and ulnar nerves. Kolchitky's stain.

Many of the nerve fibres have disappeared, while most of those which remain are smaller in size than normal. Some of these are reduced to a mere pin-point in size, and nearly all stain poorly. The connective tissue of the endoneurium and epineurium is markedly increased in amount.

Section 5. Section of sciatic nerve. Kolchitky's stain.

Answers same description as Section 4.

Section 6. Section of voluntary muscle. Haemalum-eosin stain.

The connective tissue of the perimysium internum is increased in amount. Some of the individual muscle fibres seem normal in appearance, but most of them are smaller than normal, and very irregular in size and outline. Some areas show irregular masses of homogeneous, pink-staining material, which is apparently made up of a number of degenerating fibres. The striations on the fibres have nearly all disappeared, and the fibres stain very unevenly, some staining normally, others hardly at all. There is a marked round celled infiltration between the fibres in many of the bundles. The nuclei of the sarcolemma appear increased in number, but this is probably due to the fact that so many of the fibres are shrunken in size.

*Resume of Disease:* The presence of abnormal cavities within the spinal cord was noted as long ago as 1546, but it was not until 1824 that Ollivier, of Angers, recognized the condition as a pathological entity and gave it the name of syringomyelia. Since that time there have been about 300 cases reported, and an attempt has been made to name the different cavities according to their origin; as, Hydromyelia, in case of a simple dilatation of the central canal; syringomyelia, where the cavity was the result of a degeneration of gliomatous materi-

al; haematomyelopore, if the cavity was caused by hemorrhage into the cord substance, etc. Since the clinical features of all of these conditions are identical, and it is often impossible to differentiate between them even microscopically, this nomenclature is now being dropped by the best authorities, and all conditions of abnormal cavity formation within the spinal cord are included under the generic term of syringomyelia.

As in all conditions of which but little is definitely known, there are many theories as to the etiology of these cavities, but those which seem best established are: 1. Congenital defect; 2. Degeneration of gliomatous growths; 3. Hemorrhage into the cord substance; and, 4. Hypersecretion of the cerebrospinal fluid.

In order to understand how either of the first two can produce this condition, we have only to remember the embryological development of the spinal cord. The central canal is formed from the anterior part of the neural groove, and if the walls of this tube fail to unite properly behind it, the result will be an enlarged central canal. On the other hand, even though the walls of the tube unite normally, it is possible for a portion of the ependymal cells lining the tube to become constricted off and forced out into the surrounding tissue, forming an "embryonal rest." It is the function of these ependymal cells to form the glia or supporting framework of the cord, and the cells of this embryonal rest may, sooner or later, under the stimuli of trauma, hard work, exposure, etc., assume a semi-malignant character and produce an excessive neuroglia in this region. In that case, there would eventually arise a time when this tissue would contract, as masses of newly formed connective tissue always do, and this by shutting off the blood supply of the tis-

sues near the center of the mass would cause degeneration and cavity formation. The cells at the outside of the mass, being properly nourished, would produce more and more glial tissue, while those near the center were degenerating. In this way the cavity would grow larger and larger, but remain constantly surrounded by a zone of dense glial tissue.

A hemorrhage into the cord substance would, in the same way, produce degeneration, and the absorption of this material would likewise leave a cavity.

Sometimes the dilatation of the canal is a part of the general enlargement of the lymph spaces of the brain and cord which accompanies hydrocephalus.

The cavity, regardless of its formation, as a rule communicates with the central canal, and is nearly always lined in part at least by columnar ependymal epithelium. At one time it was supposed that this lining proved the condition to be simply the result of a dilatation of the central canal, and all these cases were classified as hydromyalias, but we now know this is a mistake. That it may exist apart from simple dilatation of the central canal is proven by the fact that cases have been described in which anterior to the opening and entirely separate from it was a normal canal.

The symptoms produced by this abnormal condition depend entirely upon its location and the portion of the cord involved. The cavities which constitute the anatomic basis of syringomyelia may be found in any portion of the cord, but are most common in the cervical and upper dorsal regions. The gray matter of the cord is chiefly involved, especially the posterior horns, but degeneration of the posterior columns and lateral tracts is nearly always present.

The fibres carrying pain and thermal impressions which cross to the opposite side of the cord, passing close to the cen-

tral canal, are first involved. If these are the only fibres affected we have the peculiar disassociation of sensory impressions which is characteristic of the disease. The patient's kinesthetic and tactile sensations will be undisturbed, but some areas of the body (generally of the arms or chest) will be anesthetic to heat and pain. This often results in these patients receiving severe burns without their experiencing the slightest pain. Of course, this typical condition is rarely found uncomplicated by other symptoms, but by careful search some areas of the body will generally be found to present it.

A further extension of the process backward will result in the impairment of tactile sensations, while muscle and joint sensations are the last to be lost. In some cases the process is accompanied by a neuritis which causes severe periodic pains in the extremities.

Motor symptoms depend upon the portion of the motor tract affected. An involvement of the pyramidal tracts results in a spastic paralysis, and contractions, while involvement of the anterior horn cells which is more common gives the usual results of degeneration of the lower motor neurone, i. e., flaccid paralysis and atrophy of the muscles. Some muscular atrophy is almost always present and may reach a high degree.

Trophic disturbances, such as felons, boils, abscesses, etc., are very common and all heal badly, often producing deformities. This is especially true of the type known as Morvan's disease, in which extensive mutilations of the fingers and toes result from whitlows.

Arthropathies are almost always present, involving the lower extremities and the spinal column most frequently. Scoliosis or other deviations of the spinal column are found in about one-half of the cases, but may be accounted for in part by the muscular weakness. The bones

may be affected, becoming fragile and easily fractured, as in *tabes dorsalis*.

As a rule, all or nearly all of the above conditions are combined in varying degrees and the resulting syndrome is very confusing, as may be inferred from the fact that the disease is rarely correctly diagnosed *ante mortem*. The loss of pain and thermal sensations with the retention of tactile and kinesthetic sensations is practically pathognomonic when found, although it may be partially simulated by hysteria.

The disease runs a slow course, extending in favorable cases over twenty or thirty years, or even more, but is invariably fatal, as would be expected from its nature. Treatment, aside from simple palliative measures, will remain practically futile until some means is discovered of checking degenerative processes in the spinal cord.

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There has been much comment *pro and con* regarding the department of "Progress of Medicine," and the following letter indicts the feeling of the *pros*:

"Boulder, Colo., Dec. 6, 1907.

"Dr. George A. Moleen, Denver, Colo.:

"Dear Doctor—Why can we not have a Department of Obstetrics in COLORADO MEDICINE? It seems to me that there are enough men in Colorado teaching and otherwise especially interested in the subject to make it of interest to have not only a department in the journal, but also a Section in the State Society. I for one would be glad to see both. Very truly yours,

W. W. REED."

It was believed that this section of the journal was of more value to the majority, and therefore great pains have been taken to select the men best fitted to each department. It would be greatly appreciated by the Publication Committee if individual opinions regarding this matter were communicated to the editor.

COMMITTEE.



# Progress of Medicine

## INTERNAL MEDICINE.

EDITED BY

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## HUMAN AND BOVINE TUBERCULOSIS.

That there are two types of bacilli—human and bovine—which differ morphologically, culturally and in virulence, is now practically universally conceded, but while many agree with Koch's statement, made at the London International Congress of Tuberculosis, that the two were different in kind and that there was little likelihood of human beings contracting the disease from bovine sources, there is probably an equally large number who agree with Behring that this is the *principal* means of conveyance, while the main army of clinicians occupy a ground somewhere between these two extreme views.

The Royal Commission on Human and Animal Tuberculosis made a primary report (*Brit. Med. Jour.*, Feb. 9, 1907,) in which they favor the clinical unity of the two germs, and conclude that there is a certain number of cases of tuberculosis in children—particularly intestinal—in which the source of infection is clearly cows' milk. Of sixty cases of human tuberculosis investigated by them, fourteen were unquestionably from that source, and contained the bovine form of bacillus only. "A very considerable amount of disease and loss of life, especially among the young, must be attributed to the ingestion of cows' milk containing tubercle bacilli."

Nathan Raw thinks there are two distinct and mutually antagonistic types of the disease, "the bovine type, conveyed by milk through the intestines, and the human type, conveyed by air to the lungs."

At the International Tuberculosis Conference, held in Vienna in September of this year, the route of infection was discussed; Weichselbaum and Calmette arguing that infection takes place almost exclusively through the alimentary canal, by milk or meat; while Flugge and others took the opposite view.

Shaw (*Jour. A. M. A.*, Oct. 12, 1907,) found such a variety of conflicting opinions that he addressed seventy-nine letters to the leading pediatricists of this country with a list of questions bearing upon the subject, and received sixty-seven answers: "Forty of the sixty-seven answers to the questions of bovine transmission were negative, non-committal or restricted, nineteen simply answered yes, and nine were able to report cases, of which number only three recorded cases in which the bacillus had been proven to be of the bovine type. One well known clinician of large experience wrote that he had been trying to find some well authenticated case of transmission of bovine tuberculosis, but to his surprise had been unable to do so." He quotes Dr. Ruhrah, of Baltimore, as believing that it is not of common occurrence—on the whole Shaw believes it rare.

Ravenel (*Amer. Journ. Med. Sci.*, Oct., 1907), in his address delivered before the Fourteenth International Congress of Hygiene and Demography, Berlin, Sept. 23, 1907, gives the results of his own studies—which have been very exhaustive—as well as those of many other careful investigators.

He lays particular stress upon the ability of tubercle bacilli to pass through the intestinal wall by way of the lacteals—particularly during the digestion of fats—into the thoracic duct, thence into the general circulation, and to be filtered out by the lungs, without causing any appreciable lesion of the intestinal wall or mesenteric glands.

Calmette's work was especially designed to prove this. He found it impossible to produce anthracosis of the lungs by having animals breathe atmosphere saturated with lamp-black, so long as the esophagus was ligated, but when lamp-black mixed with food was introduced into the stomach—using a tube to prevent the possibility of any of it entering the trachea—anthracosis of the lungs rapidly developed. When bacilli, dry or moist, were introduced by inhalation, insufflation or inoculation direct, into the trachea, they never passed beyond the first division of the bronchi. In 1901 Ravenel isolated bacilli from the mesenteric glands of a child that had died of tuberculous meningitis, following primary intestinal infection, which showed all the characteristics of the bovine bacillus, killing cattle rapidly.

Dogs fed bacilli in an emulsion of fats, showed them in their chyle in three and one-half hours.

Numerous experiments are quoted to prove that the bacilli pass promptly through the intestinal mucosa without causing a lesion thereof.

Theobald Smith and Herbert R. Brown have recently (*Jour. of Med. Research*, July, 1907,) made a further contribution to the study of mammalian tubercle bacilli, in which they accentuate the morphological and cultural difference between the human and bovine type and report several more cases of human infection with bovine bacilli.

They report one case which had, in addition to the human bacillus, bovine and swine bacilli and call attention to the possibility of some of the reported cases of bovine infection being only secondary infection.

O. M. G.

#### INTRAVENOUS TREATMENT OF SYPHILIS.

G. Frank Lydston (*Jour. A. M. A.*, Nov. 16, 1907,) reports ten cases of syphilis treated by intravenous injection of mercury, with the most satisfactory result in every case. In all but one, other methods had been tried without satisfactory results.

He used a one or two per cent solution of the bichloride in water and gives a daily dose of from  $\frac{1}{8}$  to  $\frac{1}{2}$  gr. A tourniquet is placed upon the arm above the site of injection—the median basilic or median cephalic, generally being used on account of accessibility—and when the needle is positively within the lumen of the vessel, the *tourniquet is removed before* any fluid is injected. This he insists upon, otherwise the portion of the vein may be made to slough on account of the cauterant action of the mercury. In only two instances was there any disturbance, one of which was due to neglect of the above precaution, and the other, he thinks, was due to his having passed the needle into the posterior wall of the vein.

O. M. G.

#### EARLY DIAGNOSIS OF GASTRIC CARCINOMA.

Stone (*Amer. Jour. of Sci.*, Oct., 1907), after emphasizing the necessity for earlier diagnosis, reviews the symptoms in a very clear manner. While nothing especially new is brought forth, we are reminded of much that is helpful. It is well not to ignore the possibility of the development of carcinoma upon the site of an ulcer, for this, it seems, not infrequently happens, and the cure of the ulcer—surgical or otherwise—might have prevented the cancer. Simple dyspeptic disorders, anorexia flatuency and general diffuse abdominal distress, at the height of digestion, four to five hours after eating—rather than acute local distress shortly after eating, is present in

most cases. Vomiting is generally not an early sign, and may be a very late one if the pylorus is not involved. Hemorrhages are relatively late as a rule, except where engrafted upon simple erosion or if the cancer be of the encephaloid variety which ulcerates early. Pain is not, as a rule, marked in early cases and when present is usually of a constant, dull, heavy boring character, differing from the acute paroxysmal character of ulcer. The patient *may* be free from pain during the entire course. Tumor is seldom felt until relatively late—especially if on the lesser curvature or the posterior surface—on the other hand, the spleen, drawn down by inflation, a misplaced kidney, fecal matter in the colon and retro-peritoneal masses have been mistaken for cancerous tumor of the stomach. Gastric analysis, as a rule, gives the earliest evidence, of positive value, and if patients presented themselves earlier, and physicians made use of the simpler gastric analyses earlier, much more effectual work might be done. The simple tests for HCL lactic acid, occult blood—for which purpose the benzidin test is most praised—and the microscopic appearance if normal and abnormal gastric contents, would avail much. However, one should no more exclude cancer from one or two negative tests than to exclude chronic interstitial nephritis from one or two negative urinalyses. The first fasting morning a modified Ewald-Boas test should be given and withdrawn in 50 minutes, on the second there should be added to this  $\frac{1}{4}$  pound of chopped beef broiled and seasoned slightly and removed in three to three and one-half hours. And other modifications if found necessary. Inflation of the stomach and gastric illumination in thin subjects are helpful. The finding of the Oppler-Boas bacillus is important. Moore and Palmer have

shown that in cancer located elsewhere in the body, there is a diminution or absence of HCL. Sahli's desmoid reaction is important, but is often misleading. Tissue fragments *may* be found for microscopical examination, but generally involves too much time. Pyloric stenosis is, in the opinion of Sahli, diagnosed too often. Motility may be quite normal if the cancer does not involve the pylorus. The iodine test is unreliable. Enlargements of the Supraclavicular glands may be helpful, but this is hard to recognize early. Trousseau laid great stress upon obliterative phlebitis as an early sign of gastric carcinoma. The blood changes are those of a secondary anemia and may be suggestive. While none of these means lead us to make a positive diagnosis early in cancer, they should generally give us enough information to lead to an exploratory laparotomy which is the final test and should be used much more often than it is, as many lives could be prolonged if not actually saved thereby.

O. M. G.

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#### THE RESULTS AND DANGERS OF ALCOHOL INJECTIONS IN THE TREATMENT OF NEURITIS AND NEURALGIA.

[Fischler, of Prof. Erb's Clinic at Heidelberg.]

Schlosser's (*Munch. Mediz. Wochenschr.*, No. 32, 1907,) reports on the treatment of neuralgia by deep injections of alcohol led Fischler to test the method. Six patients with obstinate supra—and infraorbital neuralgia were cured; the oedema of the lids following the injections soon disappeared. Of twelve patients with sciatica, four were cured, four benefited and four unimproved, and one of these was very much damaged by the injections. Male, age 18, ischias sinistra four injections of 70 per cent alcohol given over the nerve at its pelvic exit



and one over the peroneus. There resulted a toxic paralysis of the nervus peroneus profundus. The tibialis anticus, extensor hallucis longus and the long extensors of the toes were completely paralyzed, and electrical changes persisted for one year, and the patient is still unable to work. Three similar cases are reported from Prof. Erb's clinic, in each case the injections were followed by toxic degenerative neuritis with complete paralysis and reaction of degeneration.

The injections were made approximately midway between the trochanter major and the tuber ossis ischii, often at the most painful point. The nerve was sought out by the needle and 1/4 cc of 70 per cent to 80 per cent alcohol slowly injected. Usually there followed immediately intense pain in the entire leg, which soon disappeared. Of course every aseptic precaution was observed. The unfortunate after effects have not led Fischler to advise discontinuance of the method, but it should be understood that the injection may do great harm.

Schlosser and Lange have reported numerous cures of obstinate sciatica and other neuralgias by local injections of alcohol, normal salt solution and B-Eucain. Schlosser's results in the treatment of trigeminal neuralgia have been especially good, and he is ready to propose the injections as a substitute for resection. It is true that his results have not been permanent, relapses occurring within six to twelve months, but the results from resection are not better. He claims to have made the injections directly into the nerve, or under the nerve sheath, and offers as evidence the intense pain and escape of fluid on the withdrawal of the needle, but in no case was paralysis following the injection reported, and this led Finkelnburg to undertake experiments to determine whether it was

possible to introduce a considerable quantity of fluid beneath the nerve sheath, and if so, whether this could be done without causing degenerative changes in the nerve. The experiments (*Deutsche Mediz. Wochenschr.*, No. 40, 1907,) were made on dogs. The sciatic nerve was exposed, but not injured, and 60 to 80 per cent alcohol, normal salt solution, or B-Eucain injected in some cases directly into the nerve or under the nerve sheath, in others around the nerve and the wound closed by sutures. He found that when the needle was introduced vertically (as the injections are supposed to be made), it was impossible to force fluid under the nerve sheath, that it escaped around the needle, and only when the needle was carefully introduced obliquely a short distance under the sheath, was there any distension of the Neurilemma showing retention of the fluid, and in the second place that without exception these injections were followed by paralysis of the muscles, supplied by the nerve and microscopic examination showed pronounced degenerative changes in the nerve below the injection. Injection of fluid in the tissues around the nerve was followed by prolonged paralysis and microscopic examination discovered marked degenerative changes in the peripheral nerve bundles, and hemorrhages within the nerve sheath. If the injection was into the nerve and salt solution or eucain used the paralysis was more transitory and the degenerative changes less extensive. Finkelnburg concludes, First, it is not easy to inject fluids into a nerve and; Second, when the nerve is entered the operation is always followed by motor disturbance. He warns against injections of alcohol in the treatment of sciatica on the ground that the effort to reach the nerve, if successful, is followed by prolonged paralysis.

W. J. B.

**SURGERY.**

EDITED BY  
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**THE SURGERY OF MOVABLE KIDNEY.**

Dr. J. Chalmers Da Costa (*Therap. Gaz.*, Nov., 1907), under this title, says: In many cases of movable kidney operation is not indicated. A movable kidney should not be operated on unless the mobility is doing actual harm or is so great in range that it is certain to do harm. It is therefore necessary in every case to diagnose the range of mobility, the degree of harm already done and the probability or certainty of future harm before deciding to operate. There are three degrees of mobility; the first degree, or slight mobility includes those cases in which, perhaps, a considerable extent of the kidney can be palpated, but in which it is not possible to bring both hands together above the organ when one hand is held in front and the other behind. In these cases conservative treatment is indicated. The second degree, or marked mobility, includes those cases in which the hands can be brought together above the organ. All these cases require operation. The third degree, or great mobility, includes those cases in which the kidney drops to the pelvic brim, or perhaps moves beyond the umbilicus. All these cases require operation. Having determined that there is mobility beyond physiological limits, the next question is regarding the treatment. In mobility of the first degree, without local or general symptoms, there being merely the evidences of hysteria or of a neurotic state, operation is contraindicated. Operation is indicated in a case of mobility of the first degree if distinct local symptoms persist in spite of conservative methods of treatment and if the mobility increases. This implies that the patient must be examined at frequent intervals. Three local symptoms are of great im-

portance, severe renal pain, distinct renal tenderness and enlargement of the kidney. Conservative treatment consists in prolonged confinement to bed with forced feeding to encourage deposition of fat and is suitable in some cases. Kidney pads are condemned. A broad abdominal bandage such as the the Gallant Corset is often effective. The best technique of operation is discussed, the author condemning the practice of putting stitches of any kind through the kidney substance, also the practice of anchoring the kidney by its rolled out capsule. The author favors Senn's operation with gauze pads, modifying the method by employing gauze slings sewed together with catgut and placing the suture line anterior to the replaced kidney, thus facilitating the removal of the pads. The wound heals in eighteen to twenty-one days. The author concludes with the statement that he operates on fewer cases of movable kidney every year, and treats more of them by conservative methods.

**NERVOUS AND MENTAL DISEASES.**

EDITED BY  
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**MEDICO-LEGAL PROCEDURE IN CRIMINAL CASES.**

Several months ago apropos of a review of opinions concerning our code of criminal procedure judged by the standards of modern psychiatry and as brought out in a discussion of this subject by the New York Psychiatric Society, we took the position (against the consensus of opinion there expressed), that judgment of mental and moral capacity of criminals alleged to be insane should remain with the jury. In a recent editorial (*American Medicine*, Oct., 1907,) this view is again advanced, and stated as follows: "The jury must re-

main the judges of fact for that is the foundation of the democratic liberties of the Anglo-Saxons. We demand that our causes be decided by our peers, not by those in authority over us nor by those beneath us, but by those who think as we think and do as we do, and who best interpret our acts. The jury must be given the exact facts and when necessary, the impartial opinions of learned men to help understand the facts. Opposing experts mutually destroy the value of their opinions and defeat justice. \* \* \* Experts have enormous influence. It is not true that the Thaw jurors 'paid no attention to the alienists,' for several were convinced that the accused was insane and the rest were convinced by the other alienists that he was not insane. Impartial opinions are now demanded by the very abuse of partisanship. From all over the world there are suggestions of plans to remove the expert from the influence of either side. The general opinion seems in the direction of a commission selected by the court but subject to objection by either side. The last suggestion in the case of criminal insanity is to have a permanent board of alienists appointed by the supreme court after recommendation by some medical society. From this board a commission acceptable to each side will be selected to examine into the case and report its findings to the jury. There will still be differences of opinion, for that will be human, but there will be no suspicion of bias or dishonesty. \* \* \* Hired experts will always be used by both prosecution and defense as a matter of necessity to assist in preparing the case, but they must not be permitted on the witness stand as witnesses. \* \* \* Such expert would be recognized as an advocate, but if he is a witness, he must have no connection with either side, and be as impartial as

the judge and jury. No one doubts the fairness of a judge because he was once an advocate, nor would an expert witness be tainted because he was a hired assistant of an attorney on some previous case."

#### LESIONS OF THE LENTICULAR ZONE.

The lenticular region of the cerebrum, lesions of which, as regards cerebral topography, have always been puzzling, because of difficulty to distinguish what were effects of lenticular disintegration and what was due to injury of the adjoining internal capsule, have again been pushed into prominence by Marie's recently published views on aphasia which deny the apparently established teaching as to cause of various forms of speech defect due to acquired lesion. In a paper (*Jour. of Nerv. and Ment. Dis.*, Sept. and Oct., 1907,), based on eleven clinical and necropsic studies of lesions involving the lenticular zone, Mills and Spiller conclude that:

1. Lesions restricted to the lenticula apparently do not cause sensory symptoms.
2. Motor symptoms probably result from lesions situated in certain parts of the lenticula; speaking generally the lenticula may be regarded as a motor organ.
3. Anarthric or dysarthric speech disorders result from lesions of some portion of the left lenticula, which probably contains centers which are concerned with the movements which make speech possible.
4. Destructive lesions of certain portions of the lenticula probably cause a paresis of the limbs or face.
5. The paresis or paralysis which is caused by lenticular lesions differs from that produced by capsular lesions, the impairment of power not being so se-



vere and not being so characteristic in the former as in the latter case.

6. The paresis or paralysis which is caused by lenticular lesions differs from that produced by cortical lesions in that it is less likely to be dissociated, although disassociated lenticular paresis may occur.

7. While the loss of power which results from a lenticular lesion is permanent, it is usually not intense.

8. Persistent true motor aphasia, as it is generally understood, is not caused by a lesion restricted to the lenticula no matter what its size or destructiveness.

9. The insula, cortex and subcortex play an important part in speech phenomena, one entirely different from that played by the lenticula and the internal capsule.

10. The insula is a part of the cortical motor center for speech, Broca's convolution probably forming with the insula the entire cortical motor center for speech.

11. Motor aphasia may be present without a lesion of the left third frontal convolution.

12. The lenticula forms too large a portion of the cerebral hemisphere to be regarded merely as a vestigial organ.

#### OPHTHALMOLOGY.

EDITED BY

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#### CONJUNCTIVAL DIAGNOSIS OF TYPHOID FEVER.

Chantemesse brought forward this subject at a recent meeting of the Academic de Medicine (*Revue de Therapeutique* and abstracted in *The Practitioner*, Nov., 1907). He stated that the great success of the ophthalmo-reaction of Calmette in the diagnosis of tuberculosis (see abstract in COLORADO MEDICINE,

Oct., 1907,) had led him to try if the conjunctiva was similarly sensitive to a typhoid toxine in typhoid fever. For the purpose he made use of toxine, dry, reduced to powder, capable of being weighed, and active to a fraction of a milligramme. This powder was obtained by precipitation from a strong solution of typhoid toxine, by means of absolute alcohol. One fiftieth of a milligramme of this, dissolved in a drop of water, and instilled under the lower lid, gave clear evidence of the absence or presence of typhoid fever in the subject under observation. The test has no drawbacks. The temperature and general condition are not affected.

In healthy persons, or in those suffering from any other disease than typhoid, there is caused, two or three hours after the installation of the toxine, a little redness and lacrymation which disappears in three or five hours, and on the following day no difference can be noticed between the two eyes. In patients in any stage of typhoid fever, including convalescence, the reaction is very marked, reaching the maximum between six to twelve hours after instillation, and lasting until the following day. The reaction is characterized by redness, lacrymation and the production of sero-fibrinous exudate. Twenty-four hours after the instillation the eye treated can still be recognized by the redness, which usually persists for two or even three days.

Chantemesse was unable to say definitely how early in the disease the reaction can be obtained. The conjunctiva of a rabbit shows it forty-eight hours after in oculation under the skin with typhoid bacilli. After an experience of some extent, he is convinced that the test is free from danger, and allows the physician to recognize with certainty in a few hours, whether a patient is affected with typhoid fever.

## CONJUNCTIVAL REACTION TO TUBERCULIN.

Sidney Stephenson (*Brit. Med. Jour.*, Oct. 19, 1907,) believes that in the Calmette ophtho-  
lmo-reaction, we have a simple, trustworthy, efficient and economical means of recognizing the existence of tubercle in any part of the patient's economy. He has employed the 1 per cent solution of dried tuberculin in upwards of thirty eye cases, the results of which may be epitomized as follows:

1. *Interstitial Keratitis.* Five cases presenting stigmata of inherited syphilis did not react, whereas it is significant that a positive result was obtained in three others apparently free from syphilis.

2. *Disseminated Choroiditis.* Three cases were tested in which so far as can be ascertained, the patients were free from syphilis. In all of these the ophtho-  
lmo-reaction was obtained.

3. *Eczematous Keratitis and Conjunctivitis.* Positive results in six of the seven cases.

4. *Conglomerate Tubercle of the Iris and the Ciliary Body.* One case with positive result.

5. *Tubercle of Cornea.* Ophtho-  
lmo-reaction positive.

6. *Episcleritis.* Three cases in women, recurrent. One positive result in a patient with enlarged cervical, inguinal and axillary glands.

7. *Irido-cyclitis.* Two cases, both of which reacted.

Stephenson is convinced that by the systematic employment of the serum, advance will be made in our knowledge of the etiology of certain eye affections.

## EAR, NOSE AND THROAT.

EDITED BY

Wm. C. Bane, M. D.,

Professor of Otology, Denver and Gross College of Medicine.

C. E. Cooper, M. D.,

Denver, Colorado.

### ATROPHIC RHINITIS, ETIOLOGY AND TREATMENT.

Joseph C. Beck (*Annals Otol., Rhin. and Laryng.*, June, 1907,) offers more encouragement in the treatment of this condition than has been heretofore generally accepted.

Reviewing the literature, he mentions the various opinions and theories, among them the belief that congenital atrophy and lack of vitality is the etiologic factor as advocated by Zaufal, Hegman and Hopmann. Again the micro-organic theory based upon cocca and mucosus bacillus accepted by E. Fraenkel, Lowenberg, Abel, Hajék and Perez, all the sarcinae according to Belmont or the pseudodiphtheria bacillus advocated by Belfanti and Vedova.

A generally accepted theory is that a violent infection such as occurs with many of the acute exanthematous diseases is the primary cause. The trophoneurotic changes endorsed by Zarniko are mentioned.

Among the more recent theories that of sinus involvements and their chronic discharges being the etiologic factor, is dwelt upon most extensively and the author, as well as Michel, Grunwald, Hajek and others, uphold the truth of this causation. Extensive sinus disease is not necessary, one or two ethmoidal cells only need be affected. Hajek reports two cases of marked adenoid enlargement with atrophic rhinitis in which removal of the adenoids was followed by a regeneration of the atrophied structures. The correction of sinus disease was also followed by good results. He believes that

when the sinus discharge is deposited over the turbinate bones it causes a destruction of the cellular elements followed by contraction of the connective tissue with consequent anemia and finally atrophy.

For the determination of sinus disease resort is had to the X-ray and skiagrams of both lateral and an antero-posterior exposure are made from 60 to 80 seconds in duration. Out of twenty-four cases radiographed the sinuses were found involved in twenty-one.

The cases reported are divided into six groups and an exemplary case reported from each group.

Group 1. Seven Cases. Miss M., 17 years. Since childhood has had crusts, foul odor, headache, dizziness, dry throat, poorly nourished and anemic.

Nasal examination shows bilateral atrophy of inferior turbinates with enlarged middle turbinates.

Radiograph shows involvement of all sinuses.

Puncture of antrum shows thick greenish pus.

Treatment: Irrigation of sinuses with iodine-formalin-salt solution, followed by suction and finally an operation—removal of middle turbinate and paraffin injection into inferior turbinate—proved satisfactory with regeneration of the mucous membrane.

Group 2. Four cases. Miss C., 22 years. Always had crusts and odor. General health good. Nasal examination shows atrophy of both inferior turbinates, with thin middle turbinate sinuses easily probed. Ear negative.

Radiogram reveals involvement of sinuses but not as extensive as in group one.

Transillumination dull.

Treatment: Irrigation of sinuses with iodine-formalin-salt solution, injection of cold paraffin into both inferior turbinates followed by improvement.

Group 3. Four cases. Mr. B., 25 years. Dry hacking cough for two years, crusts and odor for a few months. General health good. Nasal examination shows many crusts, partial atrophy of inferior turbinates, thick viscid secretion over middle turbinates. Epipharynx, nasopharynx larynx and trachea congested. Sputum examination negative for bacillus tuberculosis, but mixed staphylococci and bacilli were found.

Radiograph negative. Antral puncture negative.

Treatment: Inhalation of iodine-formalin-salt solution from Bulling's vibrator three times a week for ten minutes. All improved.

Group 4. Two cases. Miss M., 26 years. Crusts and odor on the right side, also headaches and impaired vision on the right.

Nasal examination: A complete atrophy of the right inferior turbinate bone, a streak of pus going into the throat from the middle turbinate which is large and slight hypertrophies on the left.

Antral puncture shows pus and transillumination is dull on the right side.

Radiograph shows right ethmoidal and antral disease.

Eye examination shows dilated pupil, paralysis of the sphincter pupillae and a vision of 20/50, which does not improve.

Treatment: Complete exenteration of the antrum, ethmoid and sphenoid with relief from headaches and marked local treatment.

Group 5. Three cases. Mr. B., 43 years. Denies specific disease; com-



plains of headache and nasal and throat catarrh. Expectorates small dry pieces of mucous, throat and nose dry and has a bronchitis every winter, especially if exposed. Hears poorly and has head noises.

Normally nourished man. Heart, lungs, urine and blood examination negative.

Nasal cavities: Bilateral atrophy of inferior and middle turbinates, also atrophy of larynx and naso-pharynx. Dirty crusts are seen in the trachea. Both tympanic membranes are retracted.

Radiogram shows all sinuses cloudy. Antral puncture negative.

Treatment: Bier's constricting band and Rethis' choanal plug. Results, after three months' treatment, dryness lessened and the mucous membrane healthier.

Group 6. Four cases. Mrs. E., 35 years. Dry nose and throat, crusts and ozena. General examination negative.

Nasal examination shows atrophy of both inferior turbinates with small crusts and tenacious secretion. Hearing reduced one-half and both membrana tympani retracted.

Treatment exclusively a daily application of the high frequency current with gradually increased strength until a reaction resembling a coryza appears. Stop the current and after the irritation ceases, begin again; then more toleration will be manifested. It is then gradually diminished in strength and frequency.

The department editor has also had some very pleasing results with the high frequency current causing disappearance of ozena, dryness and a healthier condition of the mucous membrane.

C. E. C.

## Constituent Societies

The **Boulder County Medical Society** met in regular session in the Physicians' Block, Thursday, November 7, at 8 p. m.

Members present: Drs. Gilbert, Baird, Reed, Lindsay, Queal, Cattermole and Wood.

The post-graduate work taken up in November was continued, with Dr. Whitman, Professor of Pathology at the University of Colorado, as lecturer for the evening. Dr. Whitman's subject was **Tumors**, with special reference on this evening to **Carcinoma**. The lecture was very interesting and instructive.

At the close of the lecture, the regular business meeting was held, after which the society adjourned to meet Thursday, December 5, 1907.

LUCY M. WOOD, Secretary.

The **Larimer County Medical Society** held a regular meeting in the City Hall. Those present were: Drs. Upson, Taylor, Norton, Rew, Bell, Replogle, Spicer, Neva, Quick, Halley, Dale, Killgore, Purcell, Miller (Wellington), Day, Schofield, McHugh, Weir, Winslow, DeArmand and Stuver. The minutes of the last meeting were read and adopted.

The name of Dudley W. Day (Rush, 1907,) being duly approved by the admission committee, was presented, and Dr. Day was unanimously elected a member of the society.

The subject of **contract practice** was then taken up and discussed by Drs. Miller, Upson, Taylor, Stuver, Dale, Norton, Killgore, Winslow and McHugh. It was then moved, duly seconded and unanimously carried that the resolutions on "Contract Practice," adopted by the state medical society at Glenwood Springs be adopted by this society, viz:

Whereas, The doing of contract practice for lodges, fraternal orders, societies and similar organizations, at entirely inadequate prices, is derogatory to the dignity and subversive of the welfare of the medical profession; and

Whereas, Such practice tends to careless, slovenly and inefficient work on the part of physicians, thereby lowering his efficiency and scientific standing, and at the same time militating against the best interests of the patients therefore, be it

Resolved, By the House of Delegates of the Colorado State Medical Society, in regular convention assembled, that such contract practice is hereby condemned, and that our con-

stituent societies are instructed to use every possible legitimate means to suppress and stamp it out.

It was moved by Dr. Winslow, seconded and carried that the chair appoint two committees of three each to wait upon Drs. Fee and Sadler and try to prevail on them to stop contract practice.

Dr. Killgore reported the case of a man who, in falling from a building, in October, 1906, fractured the spine in the region of the tenth and eleventh dorsal vertebrae. The man died about one week ago, and the specimen obtained on post mortem examination showed the spinal cord to be entirely severed and a large part of the body of one vertebra to have been absorbed. Adjourned.

E. STUVER, Secretary.

Montrose, Sept. 12, --7.

The **Montrose County Medical Society** met at the offices of Drs. Johnson and Johnson, President Allen presiding.

The minutes of the last meeting (June) were read and approved.

Considerable discussion was had on the subject of **newspaper advertising**. All present agreed to use their best efforts to avoid the use of their names in newspaper reports of cases, in accordance with the resolution adopted a year ago.

Dr. C. Johnson gave a report of the Atlantic City meeting of the American Medical Association.

Meeting adjourned to meet October 3.

CARL JOHNSON, Secretary.

Montrose, Oct. 3, 1907.

The regular monthly meeting of the **Montrose County Medical Society** was held at the offices of Drs. Schermerhorn and Allen. The minutes of the last meeting were read and approved.

Dr. Schermerhorn read a paper on **Prevention of Nervous Diseases**. He held that persons having decided tendencies to functional nervous disease should be prohibited from marrying, but that much can be done from the offspring of such marriages by wise supervision, if such can be secured. The early age at which children are put in school was condemned.

The paper was fully discussed by all present.

CARL JOHNSON, Secretary.

Trinidad, Colo., Nov. 4, 1907.

The regular November meeting of the **Las Animas County Medical Society** was held at the office of Dr. D. G. Thompson, with President James G. Espey in the chair. The minutes of the previous meeting were read and approved. The following members were present: Drs. Forhan, Thompson, Robinson, James Espey, Jaffa, Fox, Beshoar and Freudenthal. Dr. Fox reported a case of **gonorrheal ophthalmia and gonorrheal arthritis** occurring in a baby ten days old. Dr. Thompson then presented a most interesting and exceedingly instructive paper entitled "**The Common Manifestations of Rachitis**," which was thoroughly discussed by all present. The application of Dr. W. M. Wood to become a member of the society was referred to the trustees. The office of Drs. Beshoar and Fox was selected for our next meeting, and Dr. Fox to present the paper.

ALFRED FREUDENTHAL,  
Secretary.

## Other Societies

### Colorado Ophthalmological Society.

The stated November meeting was held November 16, 1907, in the Denver Academy of Medicine hall, Dr. Edward Jackson presiding.

Twenty members and seventeen guests were present, representing Denver, Colorado Springs, Boulder, Greeley and Cheyenne.

Dr. Melville Black presented a case of **keratitis profunda** in a woman of fifty-eight. In twelve years she had suffered twice from keratitis. In the last attack vision seemed to have aided materially in restoration of the transparency of the cornea, which presented a nicked appearance of its outer surface.

The balance of the evening was devoted to a **Symposium on Aterio-Sclerosis and Blood Pressure**. Dr. E. C. Hill read a paper on the **Etiologic Importance of the Alimentary Canal in Relation to Vascular Pressure**, in which he pointed out the five general ways whereby alimentary disorders may affect blood pressure, viz., autointoxication, infection and inflammation, pressure and obstruction, reflex inhibition of function, and malnutrition. He said that self-poisoning from the stomach and bowels ranked first in importance, and had found subnormal vascular tension in nearly all cases showing marked indicanuria.

Dr. Hill stated that all toxic substances ab-

sorbed from the alimentary canal exerted a sclerogenic action upon the blood vessels, which might lead eventually to arterio-sclerosis and high tension.

In an address on the **Association Between Chronic Nephritis and Increased Vascular Pressure**, Dr. J. R. Arneill mentioned the intimate connection between heart, arteries and kidneys, and the importance of using a sphygmomanometer with a standard (12 cm.) cup in taking blood pressure. Physicians marveled that men with hard, pipe-stem arteries lived to be 90 or 100, and that apoplexy occurred with soft arteries, until a study of blood pressure revealed the low tension in the former, and high in the latter class of cases.

Dr. Arneill thought that Janeway had given the best explanation of high pressure in chronic Bright's disease by attributing it to hardening of the intima and media of the splanchnic arteries, and said that authority suspected chronic interstitial nephritis in high (100 to 200 mm. +) tension, especially with attendant cardiac signs, putting more reliance on it than on urinalysis.

In chronic parenchymatous nephritis pressure was usually high, slightly raised in acute nephritis, and lowered in amyloid disease or cyclic albuminuria. Apoplexy, with high pressure, indicated uremia.

Under treatment, Dr. Arneill suggested restricted lacto-vegetarian diet, massage, baths and regulated exercise, as preventive measures; digitalis as an adjuvant, and amylnitrite and nigroglycerin in emergencies.

Dr. G. A. Moleen, in a paper on the **General Effects of Arterio-sclerosis and Its Tendency to Localize**, described two forms of sclerosis, the diffuse and the nodular. Uniform thickening caused general lack of elasticity, diminished lumen and increased blood pressure, while irregularly distributed thickening gave local effects; under the former aneurism or rupture might occur, under the latter thrombosis would seem more likely.

Dr. Moleen stated that increased tension usually accompanied, and was thought to cause, arterio-sclerosis; normal systolic pressure averaging 125, and diastolic 29 mm.

Diffuse and nodular arterio-sclerosis showed selective localizing tendencies quite opposed to each other in all except the cerebral arteries, which were about as often involved with one form as the other. Nodular fibrosis seemed to affect the aorta preferably, causing aneurism; while diffuse sclerosis of the

renal capillaries appeared to be related to chronic interstitial nephritis, with its high tension.

The last paper was by Dr. E. W. Stevens, on the **Ocular Effects of Alimentary, Renal and Cardio-vascular Disease**. He said that disorders of the alimentary canal frequently produced phlyctenular disease of the conjunctiva and cornea, iritis, irido-cyclitis and chorooiditis, and called attention to the happy effect of laxatives, especially calomel, in treating ocular inflammations.

Edema of the lids, especially the lower, on rising, was one of the earliest forerunners of parenchymatous nephritis and possible anasarca. Uremic blindness was one of the most striking symptoms of renal disease, often associated with headache, vomiting and even convulsions. Sight might be regained in twelve to twenty-four hours, but occasionally not for a week. Blindness and neuroretinitis might occur in either acute or chronic nephritis, but the former more frequently occurred in the acute, the latter in the chronic stages. Retinal hemorrhages and exudates, and changes in the contour, size and general character of the retinal vessels, were often seen.

Dr. Stevens traced the effect on the retinal circulation, of aortic aneurism and regurgitation, cardiac dilatation and aneurism of the internal carotid. He stated that ocular vascular changes gave the best indication of the state of the blood vessels generally, possible to obtain in the living body, and pointed out the frequency of cerebral hemorrhage following intraocular disease. It was possible to diagnose the early stage of ocular arterio-sclerosis, easy to detect later stages.

The papers were interestingly and profitably discussed by Drs. O. M. Gilbert, J. A. Patterson, Edward Jackson, B. Oettinger and C. E. Tennant.

Dr. Jackson reported **albuminuric retinitis** of first pregnancy, with uremic blindness and premature delivery of a dead fetus, in a woman of twenty-seven. Four months later the vision had returned to normal, there was no albuminuria or abnormal blood pressure, but the choroidal vessels showed arterio-sclerosis.

Drs. W. A. Sedwick and E. R. Conant, of Denver, and A. C. Magruder, of Colorado Springs, were elected to membership.

GEORGE F. LIBBY, Secretary.



## Communications

To the Editor of Colorado Medicine:

Dear Doctor—Being of the opinion that others of your readers as well as myself are interested in the current events appertaining to our profession, which have recently come to pass, I take the liberty of writing you regarding the same. At the annual meetings of our state society we enjoy the social as well as the scientific element. We enjoy the companionship of our co-freres at a time when we are free from professional cares and we part with regret. It is therefore a pleasure to hear from our sometime friends and boon companions. How they fare during the winter months and successive days until perchance we meet again? With this idea in view, I write to inform you and your readers of certain medical happenings, which were brought to a happy and successful conclusion by the Weld County Medical Society, on October 7, 1907.

I have frequently congratulated myself that I was fortunate enough to meet and become friendly with several Greeley men at the various meetings of our state society. My friendship, it seems, was well placed, as early in October I am in receipt of a kind invitation to be present and take part in the annual fall festivities of the Weld County Medical Society. Anxious to improve the occasion and enjoy the promised fellowship, I was not slow to accept. The day was certainly well chosen and I was early on hand to meet some of my old time friends before the hour appointed for the afternoon program. I foregathered with Church and Hughes on my way up town. Both of these gentlemen I had met several times. Once I remembered well, when in Denver, hearing them lecture to the Denver County Medical Society. (I use the word "lecture" advisedly.) We then visited J. K. Miller, who was giving his undivided attention to his evening speech, and was not, therefore, anxious to detain us. But Call, some of you may know Call, the delegate of the local society. Well, if you don't know Call it is high time you did. He had several schemes deep inlaid in the texture of his gray matter, which he proposed shortly to unfold. Of these I am not at liberty to inform you. But here comes President Ringle, an exponent of the simple life, puffing strenuously along in his auto car. I shake hands with him and at his

request ride down to the depot to escort the guests expected by the next train. Here they come; a good looking and jovial crowd; President Whitney and Dr. Freeman in the van, Drs. Black, Arneill, Taussig and Lyman of Denver, Drs. Cattermole and Queal of Boulder, and Drs. Taylor and Bell of Collins. We quietly and in good form repair to Dr. Hughes' commodious office, where the afternoon medical session was scheduled to convene at 4 o'clock. The meeting was called to order by President Ringle, in the presence of some 30 or 40 members of the local society, and their guests. The medical program surpassed my expectations. Dr. Law, the veteran of the city, was the first to respond at the drop of the gavel. His paper was entitled "Personal Experiences During the Past Summer at Hot Springs in Routt County." An interesting symposium on "Gastric Ulcer" was presented by Dr. Spaulding of Kersey and Drs. Arneill and Freeman of Denver, taking up "Etiology," "Diagnosis," and "Surgical Treatment," respectively. Dr. Church of Greeley read the final paper, "Tuberculosis of the Kidney and Bladder." This was well received and highly commended. All of the papers were fully discussed by the members and their guests.

After a brief recess, we repaired with joyous hearts to the Camfield hotel, where the banquet and evening program were scheduled to take place. Sixty-five physicians and their friends gathered round the board at the appointed hour. Some slight delay was experienced through so unfortunate an occurrence as the losing of door key No. 313. Everything was in readiness for President Whitney to deliver opening grace, save for the absence of several Denver and local men. Drs. Black of Denver and Church of Greeley were deployed to summon the delinquents, but likewise failed to return. President Ringle was finally successful in rounding up the belated ones. It appears that during an informal reunion in room 313, the door key or the keyhole was lost. The usually keen eyes of Drs. Black and Church had failed to locate it. Dr. Ringle stated that he considered defective refraction the cause of many such accidents. The banquet was brilliant and successful. The toastmaster, Hon. Harry N. Haynes, had "Drunk deep at the Pierian Springs," and delivered himself in a manner befitting an audience so cultured and refined. It might be mentioned that in the toast "Higher Medical Requirements," Dr. Arneill made

a strong plea for fewer and better equipped medical schools. Dr. Whitney responded for the State Medical Society in fitting terms. Dr. Black made a brave beginning in response to "Sweethearts and Wives," but was seized in the neither quarter by a crab which had strayed from the cook's domain, ending what otherwise would have proved a beautiful and touching speech. In addition to a number of other toasts, Dr. Taussig closed the evening's proceedings by responding to the memorable toast of "Alma Mater."

"Should auld acquaintance be forgot  
And never brought to mind,  
Should auld acquaintance be forgot  
And days o' auld lang syne."

Very sincerely,

HUMOR RURAL, M. D.

Pueblo, Colo., Nov. 6, 1907.

Publication Committee, Colorado Medicine,  
Denver, Colo.:

\* Gentlemen—At the regular meeting of the Pueblo County Medical Society, we listened with deep regret, to the reading of an editorial from the October number of your journal, in which one of our members, Dr. W. O. Patterson, through no fault of his own, is made to appear, to all intents and purposes, the accomplice of a quack, one Dunn, whose license to practice medicine in Colorado has been revoked.

Dr. Patterson has fully and satisfactorily explained, to this society, his experience with Dunn and his medicine and since it seems necessary, the members of this society are glad to go on record, and emphatically state that Dr. Patterson is not, and never has been, an abortionist; that he is a man of standing in our community, an honored member of our profession. In a spirit of courtesy and fellowship, we deplore the publication in our state journal, of any matter whatever, carrying with it, a reflection upon the character of any member, until such member, or the local society with which he is affiliated, shall have been given an opportunity to explain the same, and thereby refute the slander and prevent grave injustice. Cordially yours,

(Seal) CRUM EPLER,  
Secretary-Treasurer Pueblo County Medical Society.

## Correspondence

Vienna, Nov. 5, 1907.

Editor Colorado Medicine:

Dear Sir—With the return of my health, I am glad to let your readers know something of the work in this great center of medical teaching.

I found two Denver graduates at work here, Dr. Ringolsky, of Denver, and Dr. Smedley, recently of Bingham Canon, Utah. Some seventy or eighty others, pretty well scattered when at home, represent other portions of the United States. I believe there are more from the region west of Chicago than from east of that point. I have not yet seen one from the South, much to my surprise.

The teaching is still conducted in the old Vienna General Hospital, the building dating so far back as 1784. From the advanced condition of the new buildings to the west of the present ones, much of the work will apparently be transferred there within a year or two.

Americans, more than any other students, contribute to the great popularity of the course in gross pathology given by Gohn. I feel sure this must be more from a lively appreciation of the immense importance of the study than from lack of thoroughness in teaching pathology in our schools, for the graduates of our best institutions are most keen to follow this course.

The specimens from six or eight of the most interesting autopsies of the day are carefully demonstrated by a superb teacher. No physician can listen to a patient's history, or make a physical examination, without a better appreciation of the probable cause of the trouble for having had his mind so thoroughly refreshed in this branch of our work. Nor can he stand helpless when his autobomile "lays down" without a realization that, without a knowledge of anatomy and pathology, therapeutics is a mockery.

After my personal experience with a streptococcic infection, which had for its base a severe streptococcic throat, I could not omit mention of the demonstration of a similar but fatal case at my first attendance at the post mortem room. Several such cases have occurred in Denver in the past few years, but they are not as widely recognized as they should be. We might even say that a severe streptococcic tonsillitis is more dangerous, be-

cause of the chance of a general infection, than any early detected and properly treated case of diphtheria. We have some definite control over the latter, but very little over the former.

The opsonic theory has, as yet, made but little impression upon the conservative medical profession here. I have heard it mentioned but once in a month. An assistant, recently sent to Wright's laboratory to investigate, has just returned, and steps are being taken to try the matter out thoroughly.

I am much impressed in following up the work of three or four of the best medical and surgical men here, with the fact that the post operation or the post mortem results in a revised diagnosis about as often as I have noted to be the case elsewhere. The cases are very thoroughly studied, and by excellent men, but medical diagnosis can never be an exact science. Fortunately, the opening of the abdomen is the necessary thing when some organ has perforated, and not an absolute diagnosis as to which one is guilty, and, on that basis, one cannot complain of the character of the work done.

Vienna still justifies its reputation of having an unusual amount of pulmonary and other forms of tuberculosis. The old lesions in lung or elsewhere are seen in, I think, one-half the bodies examined. The poverty, and consequent ill-nourished condition of the many poor must contribute greatly to the total. I do doubt that the dust from the very extensive stone pavements starts a slow lung irritation that is a factor in giving a lodgment to the bacillus later.

I hope to return early in December, and shall be glad to see the sun shine in his full glory again. No one is so spoiled by a cloudy sky which lasts for several days together as is the resident of that great eastern slope of which the center is Denver. Yours very truly,

J. N. HALL, M. D.

## New Members

Madera, C. J., Brush; Muir, James T., Tucker, Beverly, Knox, Charles P., Colorado Springs; Kissinger, J. D., Eastonville; Cohen, H. M., Burton, F. A., Wilkinson, W. M., Stenhouse, James, Prentice, E. C., Denver.

## Items

Dr. Alfred Hackanson, formerly of Chicago, announces the opening of offices at 418 Mack block, Denver.

Dr. George C. Stemen, of Denver, was married Wednesday, November 6, at the Southern Hotel, St. Louis, to Mrs. Beardsley, of Decatur, Ill.

We are pleased to note in the Irish Times, Dublin, of November 6, 1907, that among the candidates who successfully passed the final examinations of the Royal College of Physicians and Surgeons, the name of M. D. Healy, a graduate of the Denver University (class of 1906) as having passed with "Honours." Our congratulations are to the pupil and to the school.

The fifth meeting of the **Surgical Association of the Rock Island Lines** was held at the Albany Hotel, Denver, December 4th and 5th. The program includes twenty-six papers, special sessions being devoted to Fractures, the Ear, Uterine Displacements and Wound Infections. An informal banquet was held on the evening of the first day. The attendance exceeded the expectations of the committee.

The **Colorado State Board of Medical Examiners** has, during the year, received 276 applications for license, of which two were for duplicates. Of the remaining applicants 135 were granted licenses after investigation and verification of their credentials, and forty-six after examination. Twenty-nine applicants were refused license because they had failed to comply with the board's rules and regulations in completing their applications; eleven because of their failure to appear for, or to pass, the examination; three on account of lack of good moral character; and fifty are still pending.

The **Sanitary Bulletin**, issued by the Colorado State Board of Health, calls attention to the continued prevalence of typhoid, and urges the keeping up of effort to control it in various jurisdictions.

Small-pox in mild form has made its appearance in various parts of the state, and as a reminder it is mentioned that error has been



made in considering these cases as chicken-pox; chicken-pox is very rare in adults.

The totals of infectious diseases for October, 1907, are as follows:

Diphtheria, 84; scarlet fever, 266; small-pox, 13; typhoid fever, 725.

Total number of deaths, 875. Deaths from diphtheria, 9; from typhoid fever, 86; from scarlet fever, 14.

**Peruna Tablets—Rejoice!** The philanthropic manufacturers of Peruna have announced to an expectant and grateful world that henceforth Peruna will also be procurable in tablet form. They say that the tablets will contain all the medicinal ingredients of the liquid Peruna. As the principal or only medicinal ingredients of the liquid Peruna is cheap whisky—so much so that the hard-hearted internal revenue officers classify Peruna as a liquor, and not as a medicine—we wonder how they have succeeded incorporating that into their tablets. We follow the progress of chemistry pretty carefully, but we have not heard of any process for solidifying whisky.—Critic and Guide.

### Books Received

[All books received will be acknowledged in this column to be recognized by the contributor as the equivalent. Reviews will be made of these volumes according to merit and the interests of our readers.]

**Modern Clinical Medicine, Diseases of the Nervous System.** Edited by Archibald Church, Professor of Nervous and Mental Diseases and Medical Jurisprudence, Northwestern University, Medical Department, Chicago, Illinois. An Authorized Translation from *Die Deutsche Klinik*, under the General Supervision of Julius S. Salinger, M. D., with 195 Illustrations in the Text and 5 Colored Plates. Octavo, Cloth, Pp. 1205. Price \$7.00 Net. New York and London: D. Appleton & Company. 1908.

**Immune Sera.** A Concise Exposition of Our Present Knowledge Concerning the Constitution and Mode of Action of Antitoxins, Agglutinins, Hemolysins, Bacteriolysins, Precipitins, Cytotoxins and Opsonins. By Dr. Charles Frederick Boldau, Bacteriologist, Research Laboratory, Department of Health, City of New York. Second Edition. Re-

written. First Thousand, 12 mo. Cloth. Pp. 154. Price \$1.50. New York: John Wiley & Sons. London: Chapman & Hall, Limited. 1907.

### The Physician's Visiting List for 1908-1909.

A pocket-sized book containing data and ruled blanks for memoranda and for recording details of practice; containing, besides weekly and monthly pages, twelve memoranda pages, addresses of patients, bills and accounts asked for, vaccination and obstetrics engagements, record of births, deaths and cash account. Each in one wallet-shaped book, bound in flexible leather, with a flap and pocket pencil with rubber, calendar for two years and many useful tables. Price, \$1.00. Philadelphia: P. Blakiston's Sons & Company. 1907.

**Physiological Chemistry.** By Charles E. Simon, B. A., M. D., Professor of Clinical Pathology at the Baltimore Medical College.

Third Edition. Thoroughly Revised. Octavo. Cloth. Pp. 490. Philadelphia and New York: Lea Brothers & Co. 1907.

**Modern Medicine. Its Theory and Practice.** In Original Contributions by American and Foreign Authors. Edited by William Osler, M. D., Regius Professor of Medicine in Oxford University, England; formerly Professor of Medicine in Johns Hopkins University, Baltimore in the University of Pennsylvania, Philadelphia, and in McGill University, Montreal. Assisted by Thomas McCrea, M. D., Associate Professor of Medicine and Clinical Therapeutics in Johns Hopkins University, Baltimore. In seven octavo volumes of about 900 pages each; illustrated. Volume III. Price per volume, cloth, \$6.00 net. Lea Brothers & Co., Publishers, Philadelphia and New York. 1907.

If difficulty is experienced in reducing a paraphimosis because of swelling, before dividing the constriction apply a rubber bandage around the parts for a few minutes; this may relieve the swelling to such an extent that the paraphimosis can be easily reduced.—American Journal of Surgery.

## Books Reviewed

**Modern Medicine.** By Eminent American and Foreign Authors. Edited by William Osler, M. D., Regius Professor of Medicine in Oxford University, England; formerly Professor of Medicine in Johns Hopkins University, Baltimore; in the University of Pennsylvania, Philadelphia, and in McGill University, Montreal. In seven octavo volumes of about 900 pages each. Illustrated. Price, per volume, cloth, \$6.00 net; leather, \$7.00 net; half morocco, \$7.50 net. Lea Brothers & Company, Publishers, Philadelphia and New York. Vols. I and II.

If the present two volumes of Osler's *Modern Medicine* are indicative of the quality, character and scope of the completed system, we can safely and conservatively state that it will be the best system of medicine of its time. In his masterly introduction the editor says: "It is designed primarily for the practitioner who wishes to keep himself informed of the existing state of our knowledge in clinical medicine." Assuredly the foremost clinician of the present period, scholarly, erudite, scientific, broad, cosmopolitan and conservative, Professor Osler, better than any man living, can edit a system which shall truly and faithfully portray the "existing state of our knowledge in clinical medicine." Professor Osler's wide personal acquaintance with the best clinicians of two continents has enabled him to secure as collaborators men of unquestioned authority, each in the particular subject to which he has been assigned. The resultant combination is a work, each chapter of which presents at once the thoroughness of the monograph and the condensation of the text-book.

It is no far cry from the discovery of the tubercle bacillus to that of the *spirochaeta pallida*, yet the intervening nineteen years are crowded with more scientific medical discoveries, or rather, deductions, with more work of practical present benefit to the human race, and, potentially, of incalculable value, than the entire preceding twenty-five centuries since Hippocrates. Even the past six years have seen wonderful strides taken toward the minenium of perfect diagnosis, specific medication and effectual prophylaxis. To present all of this in any form whatever is, in itself, a task of no small dimensions, but to

present it so concisely yet completely, and withal so charmingly and elegantly, as in this system, is to attain the classic in medical literature.

Where all is so meritorious, it were indeed needless to mention the excellent points of particular chapters. From the author's introductory article on *The Evolution of Internal Medicine*, written in that charming, clear, coherent style of which he is master, to Shiga's scholarly and eminently practical chapter on *Bacillary Dysentery* which closes the second volume, the total of seventeen hundred pages are fairly filled to overflowing with the most nutritious of mental pabulum. Adami's article on *Predisposition and Immunity* reads like a fairy tale and sheds new light on darkened places. Dr. Taylor, of the University of California, in the chapters on *Auto-Intoxication* brings cosmos out of chaos and points the way toward the ultimate clearing up of a vexed question. The six chapters on *Diseases Caused by Protozoa* should be read by every practitioner, if for no other reason, than to learn what far-reaching results in prophylaxis can be attained by persistent effort rightly directed. Professors Chittenden and Mendel, of Yale, take up the subject of *Nutrition with a General Consideration of Metabolism, Normal and in Disease*. This chapter should be carefully perused for in it the proper relation of diet to health and disease is authoritatively demonstrated. The second volume treats of *Infectious Diseases*. Following a masterly introduction by Hekten there are six chapters on *Typhoid Fever*; then follow *Typhus*, *Relapsing Fever*, *Small-pox*, *Vaccination*, *Varicella*, *Scarlet Fever*, *Diphtheria*, *Measles and Rubella*, the *Fourth Disease*, *Erythema Infection*, *Whooping Cough*, *Mumps*, *Influenza*, *Dengue*, *Cerebro-Spinal Meningitis*, *Erysipelas*, *Lobar Pneumonia* (three chapters, by Musser), *Toxaemia*, *Septicaemia and Pyaemia*, *Rheumatic Fever*, *Asiatic Cholera*, *Yellow Fever*, *Plague*, and the volume closes with Shiga on *Epidemic Dysentery*.

In his introduction, Dr. Osler says: "The first consideration in a work of this kind is that it shall be helpful." If this be the only desideratum, the editor need have no fear; if it be the sine qua non of success, then of a verity, Osler's *Modern Medicine* shall be the ranking system of Internal Medicine in the entire army of brilliant systems hitherto published.

## RECIPROCITY

(READ TWICE.)

Since COLORADO MEDICINE began to accept advertisements, the management has tried to impress the ethical houses with the fact that being a State Society organ, we can only accept such ads. as theirs, and therefore they should be the more willing to patronize a journal which tries to elevate ethics and ethical preparations and turns down the others. We have also tried to impress them with the fact that the membership of our society represents the best in the state, and moreover, the members of the society being the owners of COLORADO MEDICINE, naturally read carefully everything in "our own" to note the progress being made toward the goal of self support.

Every year we receive hundreds of letters from reputable firms wishing us success, but begging to be excused, as they have "exhausted their allowance." Their reason for being polite is because they still want our personal friendship. They spend their money on questionable journals that have a small mixed circulation in Colorado, and expect the members of the State Society, the best of the profession here, to be good fellows and say nothing about business.

The detail man is not responsible for the acts of his firm, but if every member of the State Society would patronize only those who think enough of our trade to patronize our advertising pages it would be but a short time till we had all of the desirable firms with us. **TRY IT.**

The following from the South Carolina State Journal is too good to throw away, and we offer no apology for reproducing it here:

*"To the Owners of This Journal,*

*The Members of the South Carolina Medical Association:*

You know that reciprocity encourages business, don't you? Outside of common decency, and leaving aside mere etiquette, it's good business to stick to your friends, isn't it? Now, who is your friend—the smooth-tongued spiel-artist who swears undying love and admiration for you as long as he is in your hearing, and laughs behind your back at your easy gullibility and willingness to do business with him at an expense to himself of nothing more than a few lungfuls of hot air? Or is your friend the fellow who thinks enough of you to support your efforts for betterment and puts up his fair share of cash for the promotion of straightforward business intercourse with you and for the stimulation of legitimate professional business and its accompanying trade?

The last, you say? Certainly. There are no hopeless idiots among the owners of this Journal.

All right; so far, so good. But what are you doing for your friends who are helping you in your work? And what will you do for the pretenders who are "working" you for their own help?



Read the following colloquy, which actually occurred very recently in our hearing:

Affable Salesman, entering Doctor's office: "Doctor, I am representing the Blank and Blank Laboratories, of Analaska, and I have here a very elegant preparation, of which I am going to leave you samples, of the best, positively the very best, most scientific mixture of laxative salts ever offered to your discriminating profession. This is—"

Doctor, interrupting: "Does your firm advertise in the Journal of our State Medical Association?"

Salesman, with feigned pained surprised: "Er—no. Why do you ask?"

Doctor, cheerfully: "Oh, because there's really no reason why we doctors should support a firm that is not willing and ready to support us in our efforts to better existing conditions."

Salesman, affecting indignation: "Do you mean to tell me, sir, that simply because a firm does not advertise in your Journal, you refuse to consider or test its products, no matter how superior they may be—no matter how many lives they have save?"

Doctor, sweetly: "My dear man, how many firms in this country put out the best product on the market? And how many of them come in here and tell me all about it? Do you suppose, for a minute, that I, or any other doctor, have time to try them all on their merits? Do you now, eh?"

Salesman, unwillingly: "Well, no, I don't suppose you have."

Doctor: "Very good. Then isn't it reasonable and proper that what testing and patronage we have to place should favor first the firms that maintain close business relations with us—our business friends?"

Salesman: "Yes, I guess that's true. I am going to take this matter up with the House. What's the Journal's business address?"

Now, the point is that the Journal needs the support of good ethical advertisers, and if every doctor who is part owner of the Journal will pursue the above line of thought, speech, and action the effect will be magical. As long as these houses think they can work us without advertising, they will hold back. It is up to us, every one of us, to treat them as if they were from Missouri, AND SHOW THEM! By doing this we are at the same time giving loyal support to those houses that are represented in our pages, which is only decent and proper. They are the ones to whom we should always give preference, and we again urge all of our joint owners to follow up this principle and always insist distinctly when buying supplies that you wish and will have our advertisers' products—there are none better.

We have a most wonderful and estimable concord of thought in the profession of our state. What remains to be acquired is unity of action. Are there brains and energy enough in our membership to accomplish it? We think so.

This is practical, hard-sense talk, and we appeal to every individual member for active, intelligent co-operation.

Faithfully,

YOUR JOURNAL."

















